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WEATHER BUREAU - - F. W. Reichelderfer, *Chief*

MONTHLY WEATHER REVIEW

JUNE 1945

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MONTHLY WEATHER REVIEW

Acting Editor, Robert N. Culnan

VOL. 73, No. 6
W. B. No. 1442

JUNE 1945

CLOSED AUGUST 5, 1945
ISSUED SEPTEMBER 5, 1945

METEOROLOGICAL AND CLIMATOLOGICAL DATA FOR JUNE 1945

AEROLOGICAL OBSERVATIONS

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1945*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	Albany, N. Y. (93 m.)				Albuquerque, N. Mex. (1,620 m.)				Apalachicola, Fla. (5 m.)				Atlanta, Ga. (300 m.)				Big Spring, Tex. (774 m.)				Bismarck, N. Dak. (505 m.)				Boise, Idaho (868 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,003	16.3	83	28	834	25.2	16	30	1,016	25.8	83	30	982	23.2	75	30	922	27.0	40	29	952	15.1	71	29	913	18.5	49
500	30	956	15.8	73					30	960	23.6	73	30	960	24.1	63												
1,000	30	901	13.1	70					30	907	21.4	60	30	906	21.7	60	30	898	26.3	38	29	898	13.4	64	29	899	18.3	42
1,500	30	849	10.2	67					30	855	18.5	55	30	855	18.4	60	30	849	23.8	35	29	846	10.0	69	29	848	14.8	43
2,000	30	799	7.3	67	28	798	23.2	17	30	806	15.3	53	30	806	14.9	58	30	801	20.4	33	29	796	6.7	72	29	798	10.9	47
2,500	30	752	4.4	65	28	753	19.1	19	30	760	12.2	48	30	760	11.4	57	30	756	16.6	35	29	749	3.6	73	29	752	6.8	52
3,000	30	706	1.8	66	28	710	14.8	22	30	716	8.9	47	30	715	8.2	51	30	712	12.8	34	29	704	0.7	71	29	707	2.7	57
4,000	30	624	−3.6	56	28	629	5.7	31	30	634	2.8	45	30	634	2.3	45	30	631	4.9	35	29	621	−4.9	69	29	624	−3.8	55
5,000	30	549	−9.1	51	28	556	−3.2	43	29	560	−2.7	38	28	559	−3.9	43	30	557	−3.0	39	28	546	−11.2	63	28	549	−10.1	49
6,000	28	481	−15.1	----	28	489	−11.4	53	28	492	−8.3	37	28	491	−9.6	32	29	490	−9.8	----	27	479	−17.7	59	27	481	−17.1	56
7,000	28	421	−21.8	----	28	429	−18.3	39	27	432	−14.6	----	28	432	−16.3	----	29	430	−16.3	----	27	418	−25.1	53	26	421	−24.5	57
8,000	28	367	−28.8	----	28	374	−25.5	----	27	378	−21.4	----	28	377	−23.4	----	29	376	−23.5	----	27	363	−32.9	----	26	366	−31.9	----
9,000	28	318	−35.7	----	28	325	−33.1	----	27	329	−28.7	----	28	328	−30.8	----	28	327	−31.0	----	27	315	−40.5	----	25	317	−39.2	----
10,000	28	275	−42.4	----	28	282	−40.5	----	27	286	−36.3	----	28	284	−38.0	----	27	284	−38.1	----	27	271	−47.4	----	24	274	−46.2	----
11,000	28	237	−48.7	----	28	242	−47.9	----	26	247	−44.1	----	28	245	−45.4	----	27	245	−45.3	----	26	233	−52.9	----	24	235	−52.4	----
12,000	28	203	−54.3	----	25	208	−53.7	----	26	212	−51.5	----	27	211	−52.5	----	27	210	−52.2	----	26	199	−54.0	----	19	202	−55.5	----
13,000	28	173	−58.5	----	24	177	−58.4	----	26	181	−58.4	----	26	180	−58.7	----	27	180	−58.4	----	26	170	−54.2	----	16	172	−57.5	----
14,000	26	148	−60.3	----	21	152	−61.5	----	24	154	−63.8	----	21	154	−62.3	----	25	153	−62.3	----	24	146	−55.2	----	13	147	−58.3	----
15,000	18	125	−60.0	----	13	129	−63.2	----	20	131	−67.0	----	18	130	−65.7	----	18	130	−65.2	----	20	125	−55.2	----	9	126	−58.4	----
16,000	11	107	−60.9	----	7	110	−65.2	----	12	111	−69.8	----	13	111	−67.5	----	12	111	−68.0	----	15	107	−55.2	----	5	108	−57.2	----
17,000	7	91	−60.9	----					5	94	−72.2	----	8	93	−67.7	----	7	93	−69.4	----	10	92	−55.9	----				
18,000	5	78	−60.8	----													6	79	−67.8	----	6	78	−55.3	----				

Altitude (meters) m. s. l.	Brownsville, Tex. (6 m.)				Buffalo, N. Y. (221 m.)				Caribou, Maine (193 m.)				Charleston, S. C. (14 m.)				Clovis, N. Mex. (1,306 m.)				Denver, Colo. (1,616 m.)				Dodge City, Kans. (787 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	1,010	26.9	87	28	989	15.5	82	28	990	12.6	81	29	1,014	23.4	90	22	867	23.2	34	30	836	15.7	60	30	921	18.2	72
500	30	955	23.8	83	28	957	15.5	75	28	954	12.4	74	29	960	23.7	70									30	899	18.6	64
1,000	30	902	22.7	61	28	902	13.0	70	28	899	10.2	74	29	907	21.5	64									30	848	17.1	57
1,500	30	852	20.3	51	28	850	10.6	69	28	846	7.1	76	29	856	18.7	63	22	848	23.4	32					29	799	15.1	52
2,000	30	803	17.7	45	28	800	7.6	66	28	796	4.6	75	29	807	15.5	63	22	800	20.5	32	30	798	14.1	53	29	753	12.4	47
2,500	30	757	14.9	40	28	752	4.8	64	28	749	1.7	73	29	761	12.4	61	22	755	16.9	32	30	752	10.9	54	29	709	9.2	42
3,000	30	713	11.6	38	28	707	2.0	63	28	704	−1.0	69	29	716	9.4	54	22	712	12.9	32	30	708	7.5	56	29	628	2.5	34
4,000	30	632	5.4	31	27	625	−3.1	44	28	620	−6.2	64	28	634	3.6	41	22	631	4.9	35	30	626	1.0	58	29	628	2.5	34
5,000	30	558	−1.2	32	27	550	−9.0	46	27	544	−12.4	52	26	560	−2.4	45	22	557	−3.2	38	30	552	−6.8	65	29	554	−4.8	41
6,000	30	492	−7.5	----	27	482	−15.1	----	27	477	−18.4	51	26	493	−8.5	43	22	490	−10.6	----	29	485	−14.0	70	29	487	−11.9	43
7,000	30	432	−14.1	----	26	422	−22.0	----	26	416	−25.2	57	23	433	−15.0	----	22	430	−17.6	----	29	425	−21.1	51	28	426	−19.2	----
8,000	30	378	−21.3	----	24	367	−29.1	----	26	362	−32.4	----	23	379	−22.5	----	22	375	−25.1	----	29	370	−28.5	----	28	372	−26.5	----
9,000	30	329	−28.4	----	22	319	−35.2	----	26	314	−39.6	----	23	330	−29.5	----	22	326	−32.7	----	28	321	−36.5	----	28	323	−34.2	----
10,000	30	286	−35.8	----	21	275	−42.7	----	24	270	−46.0	----	23	286	−37.0	----	22	282	−40.1	----	26	277	−44.5	----	27	279	−42.3	----
11,000	30	247	−43.3	----	18	236	−49.5	----	23	232	−50.6	----	22	247	−44.9	----	22	243	−47.4	----	24	238	−51.4	----	27	240	−50.0	----
12,000	30	212	−50.8	----	16	203	−54.2	----	22	198	−53.7	----	22	212	−52.6	----	22	209	−54.2	----	23	204	−56.0	----	26	206	−55.5	----
13,000	30	182	−57.7	----	12	174	−58.0	----	19	170	−55.5	----	22	181	−59.2	----	22	178	−59.7	----	20	174	−57.4	----	25	176	−59.3	----
14,000	29	155	−63.6	----	10	149	−60.5	----	17	145	−55.7	----	20	155	−63.6	----	21	152	−62.2	----	17	148	−59.1	----	22	149	−61.1	----
15,000	18	132	−68.8	----	9	126	−59.3	----	12	123	−54.2	----	13	130	−66.4	----	16	129	−64.3	----	15	127	−60.7	----	18	127	−62.7	----
16,000	9	111	−74.0	----	8	107	−59.4	----	8	105	−54.6	----	7	110	−68.2	----	9	109	−64.0	----	9	108	−61.7	----	10	108	−62.3	----
17,000					7	92	−60.7	----													6	92	−61.6	----	6	92	−61.1	----
18,000					5	78	−58.1	----																	5	78	−61.3	----

Altitude (meters) m. s. l.	El Paso, Tex. (1,195 m.)				Ely, Nev. (1,908 m.)				Glasgow, Mont. (648 m.)				Grand Junction, Colo. (1,414 m.)				Great Falls, Mont. (1,128 m.)				Greensboro, N. C. (273 m.)				Hatteras, N. C. (3 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	877	28.6	18	30	808	14.1	52	28	936	15.4	66	30	854	20.8	34	30	885	13.8	65	30	984	21.0	78	28	1,016	22.8	87
500																					30	959	21.9	67	28	959	21.5	69
1,000									28	898	14.2	61									30	906	19.5	64	28	905	19.1	65
1,500	30	848	27.4	18					28	846	10.2	66	30	846	20.8	32	30	847	12.0	59	30	854	16.2	65	28	854	15.9	68
2,000	30	800	23.4	18	30	800	14.2	47	28	796	6.7	72	30	798	17.8	29	30	797	8.4	61	30	805	12.6	67	28	805	12.8	63
2,500	30	756	19.0	20	30	754	11.1	43	28	749	3.4	75	30	752	13.9	31	30	750	4.7	65	30	758	9.1	64	27	759	10.1	51
3,000	30	712	14.5	23	30	709	7.0	48	28	704	0.1	77	30	708	9.6	36	30	705	1.0	70	30	714	6.3	51	27	714	7.2	52
4,000	30	632	5.8	30	30	627	−0.8	54	28	620	−6.0	72	30	627	0.5	46	30	622	−6.0	77	29	631	0.8	44	27	632	1.3	46
5,000	30	558	−1.9	34	30	552	−7.6	56	28	545	−12.1	67	30	552	−7.2	55	30	546	−12.1	74	29	557	−5.0	40	27	557	−4.8	46
6,000	30	491	−9.2	----	30	485	−14.3	48	27	478	−18.5	56	30	485	−14.6	59	30	479	−18.5	68	28	490	−11.4	38	27	490	−11.0	43
7,000	30	431	−16.2	----	30	424	−21.2	----	26	418	−25.8	60	30	424	−21.4	48	30	418	−26.3	----	28	429	−18.4	----	27	430	−17.2	44
8,000	30	377	−23.5	----	30	370	−28.9	----	25	363	−33.2	59	29	370	−28.9	----	30	363	−33.8	----	28	374	−25.6	----	27	376	−24.2	----
9,000	30	328	−31.0	----	29	321	−36.5	----	25	314	−40.8	----	29	321	−36.8	----	29	314	−40.9	----	28	326	−32.7	----	26	326	−31.8	----
10,000	30	284	−38.6	----	28	277	−44.1	----	24	271	−47.9	----	29	277	−44.7	----	28	271	−47.8	----	27	282	−40.0	----	26	283	−39.2	----
11,000	29	245	−45.9	----	26	238	−50.6	----	21	232	−52.6	----	25	238	−51.2	----	27	233	−52.7	----	25	243	−47.3	----	26	244	−46.8	----
12,000	29	210	−52.5	----	25	204	−55.3	----	21	199	−53.9	----	24	204	−55.9	----	23	200	−54.4	----	25	209	−54.5	----	26	209	−53.5	----
13,000	28	180	−58.0	----	23	174	−57.5	----	19	170	−53.3	----	18	174	−58.8	----	20	171	−55.6	----	24	178	−60.8	----	25	178	−59.2	----
14,000	24	153	−62.0	----	21	149	−58.6	----	16	145	−53.7	----	13	148	−58.4	----	17	146	−55.7	----	20	151	−64.6	----	25	152	−63.6	----
15,000	18	130	−64.1	----	18	127	−59.7	----	14	124	−53.5	----	10	126	−58.4	----	9	125	−55.4	----	15	128	−66.7	----	18	129	−65.8	----
16,000	12	110	−66.4	----	11	108	−60.1	----	10	106	−54.4	----	6	107	−59.0	----	6	107	−56.2	----	8	108	−67.6	----	9	110	−66.2	----
17,000					6	92	−59.8	----	6	90	−54.5	----													7	93	−66.1	----
18,000					5	79	−59.6	----																				

See footnotes at end of tables.

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TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1945*—Continued

Altitude (meters) m. s. l.	Havana, Cuba (51 m.)				Huntington, W. Va. (172 m.)				International Falls, Minn. (343 m.)				Jackson, Miss. (97 m.)				Joliet, Ill. (178 m.)				Lake Charles, La. (5 m.)				Little Rock, Ark. (79 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface					28	996	18.7	89	30	972	13.7	72	30	1,002	24.3	81	30	992	16.6	80	30	1,013	25.4	87	29	1,003	24.0	80
500					28	959	20.3	77	30	955	13.7	66	30	957	24.4	70	30	956	17.0	73	30	958	23.1	78	29	956	23.2	71
1,000					28	904	17.5	74	30	900	10.9	64	30	904	21.3	71	30	901	14.6	70	30	905	20.6	70	29	903	20.1	70
1,500					28	853	14.2	74	30	847	7.5	66	30	854	18.0	68	30	849	11.5	71	30	854	18.2	61	29	852	16.9	71
2,000					28	803	11.5	71	30	796	3.9	70	30	805	15.5	56	30	799	9.0	64	30	805	15.4	56	29	803	14.4	57
2,500					28	757	9.3	57	30	749	0.9	71	30	759	12.7	51	30	753	7.2	50	30	759	12.6	49	29	757	12.3	48
3,000					28	712	6.7	51	30	703	−1.8	66	30	715	9.5	50	30	708	4.7	49	30	714	9.8	44	29	713	9.1	49
4,000					28	630	1.1	48	30	620	−6.8	60	30	633	3.5	42	30	626	−0.7	40	30	633	4.1	34	29	631	2.6	46
5,000					28	556	−4.7	43	30	545	−12.7	57	29	558	−3.1	44	30	551	−7.0	40	30	559	−2.4		28	557	−4.2	47
6,000					27	488	−11.0	42	30	477	−19.1	52	29	491	−9.5		30	484	−13.3		30	492	−8.8		28	490	−11.0	48
7,000					27	428	−17.9	46	30	416	−25.8		29	432	−15.8		30	424	−20.1		30	432	−15.6		28	430	−17.3	38
8,000					27	374	−25.1		30	362	−32.9		28	377	−23.2		30	370	−27.7		30	378	−22.6		27	375	−24.2	
9,000					27	325	−32.2		30	313	−40.3		28	328	−30.6		30	321	−35.0		30	329	−29.7		27	326	−32.0	
10,000					26	282	−39.9		30	270	−46.9		28	285	−38.2		30	277	−42.6		30	285	−37.2		27	282	−39.5	
11,000					26	243	−47.8		29	232	−52.4		27	246	−45.6		30	238	−50.0		30	246	−45.0		27	243	−46.9	
12,000					26	208	−54.9		28	198	−54.1		26	211	−52.9		30	204	−55.2		30	211	−52.6		26	209	−54.0	
13,000					25	178	−59.8		25	169	−54.0		26	180	−59.0		28	174	−58.3		28	180	−59.1		26	178	−59.4	
14,000					23	151	−63.3		24	145	−54.1		22	154	−62.8		23	149	−59.8		24	154	−63.8		25	152	−63.2	
15,000					17	128	−63.5		22	124	−54.7		16	131	−66.0		16	127	−60.0		20	130	−67.6		18	129	−65.8	
16,000					11	110	−62.9		14	107	−55.2		10	110	−68.8		10	108	−61.3		7	111	−70.0		9	109	−66.0	
17,000					8	93	−62.8		10	92	−55.6																	
18,000					6	80	−60.2		6	78	−55.7																	

	Louisville, Ky. (165 m.)				Mazatlan, Mexico (80 m.)				Medford, Oreg. (409 m.)				Merida, Mexico (27 m.)				Miami, Fla. (4 m.)				Nashville, Tenn. (180 m.)				North Platte, Nebr. (849 m.)			
Surface	30	996	19.9	81	29	1,002	27.0	74	30	967	22.6	38	30	1,008	29.4	64	30	1,017	25.6	82	30	994	22.7	74	30	915	15.2	78
500	30	958	20.0	71	29	956	24.9	58	30	958	21.9	36	30	956	26.4	63	30	962	23.5	79	30	958	22.3	66				
1,000	30	904	17.2	70	29	903	24.7	44	30	903	18.0	38	30	903	23.1	65	30	908	21.0	70	30	905	19.3	66	30	899	15.4	71
1,500	30	852	14.0	70	29	852	22.4	48	30	852	13.8	46	30	853	19.6	67	30	857	18.3	67	30	854	16.6	61	30	848	12.7	68
2,000	30	803	12.2	53	29	804	19.8	44	30	802	9.8	51	30	804	16.4	66	30	808	15.6	63	30	804	13.8	51	30	798	10.4	69
2,500	30	756	9.7	48	29	759	17.2	39	30	755	6.5	52	30	758	13.4	61	30	762	12.8	58	30	758	11.2	43	30	752	7.7	68
3,000	30	711	7.1	47	29	715	14.2	35	30	710	3.5	51	29	714	10.7	54	30	717	9.8	58	30	713	8.1	43	30	707	5.1	63
4,000	30	630	1.2	46	28	635	7.4	38	30	627	−1.9	43	29	633	5.0	44	30	635	3.8	56	30	632	2.0	44	30	625	−1.2	56
5,000	29	555	−5.3	49	27	561	0.0	40	30	552	−7.7	42	29	559	−0.7	40	29	561	−1.8	49	29	557	−4.3	47	30	550	−7.8	55
6,000	29	488	−11.6	45	27	494	−6.7		24	485	−14.1	42	29	493	−6.4	42	29	494	−7.5	51	29	490	−10.5	46	29	483	−14.1	51
7,000	29	428	−18.4		25	435	−12.5		23	425	−21.6	41	28	433	−12.7		29	434	−13.8	48	29	430	−17.1		29	423	−21.2	51
8,000	29	373	−25.5		25	381	−20.0		22	371	−28.5		28	380	−19.1		29	380	−20.6	49	28	375	−24.1		29	369	−28.9	
9,000	29	324	−32.9		23	332	−27.4		21	322	−36.4		27	331	−26.8		28	331	−27.9		27	327	−31.5		28	320	−36.5	
10,000	29	281	−40.3		23	288	−35.2		21	278	−44.4		25	288	−34.6		28	287	−35.4		26	283	−39.0		28	276	−44.0	
11,000	27	242	−47.9		21	249	−42.8		20	239	−52.0		24	248	−42.0		28	248	−43.3		26	244	−46.5		27	237	−50.9	
12,000	26	207	−54.7		21	214	−51.0		18	204	−57.6		24	214	−49.6		27	213	−51.4		25	209	−53.8		27	203	−55.1	
13,000	23	177	−57.0		17	183	−58.2		16	174	−59.5		19	183	−57.0		26	182	−58.7		22	179	−59.2		24	174	−56.6	
14,000	20	151	−59.2		7	157	−64.2		15	148	−58.6		11	156	−64.0		23	155	−64.6		20	152	−62.5		18	148	−57.8	
15,000	17	128	−63.2						12	127	−58.7						14	132	−68.7		15	130	−65.2		15	126	−58.6	
16,000	8	109	−63.0						6	109	−57.5						8	112	−71.7		8	110	−67.3		10	108	−60.1	
17,000																									7	91	−61.5	
18,000																									5	78	−60.4	

	Oakland, Calif. (2 m.)				Ogden, Utah (1,355 m.)				Oklahoma City, Okla. (391 m.)				Omaha, Nebr. (308 m.)				Phoenix, Ariz. (339 m.)				Pittsburgh, Pa. (382 m.)				Portland, Maine (20 m.)			
Surface	30	1,013	17.7	66	30	863	15.6	56	30	965	21.8	80	29	976	18.8	72	30	967	29.3	19	30	971	18.9	73	30	1,011	13.9	87
500	30	956	16.8	57					30	953	22.2	75	29	955	18.1	68	30	950	30.9	14	30	958	18.9	71	30	956	15.6	70
1,000	30	901	18.3	38					30	900	20.5	66	29	901	14.9	69	30	898	28.1	14	30	903	16.4	68	30	901	12.9	68
1,500	30	849	16.3	31	30	848	15.9	48	29	850	18.2	63	29	848	12.1	73	30	848	24.0	15	30	851	13.0	68	30	848	9.7	68
2,000	30	801	13.3	28	30	799	12.5	46	29	801	15.3	58	29	799	10.3	64	30	800	19.7	19	30	802	9.7	69	30	798	6.5	71
2,500	30	755	10.3	30	30	753	8.5	50	29	756	12.2	52	29	753	8.1	53	30	755	15.3	20	30	755	7.0	62	30	751	3.9	65
3,000	30	710	7.1	32	30	708	4.3	55	29	711	9.4	46	29	708	5.4	49	30	711	11.1	21	30	710	4.2	58	30	706	1.2	66
4,000	30	628	0.6	30	30	625	−2.9	60	27	630	2.9	45	28	625	−0.5	43	29	630	4.0	21	30	628	−1.1	56	30	623	−4.2	64
5,000	30	553	−6.3	29	30	550	−9.9	56	25	556	−4.6	43	28	551	−6.9	42	29	556	−2.9		30	553	−6.8	52	30	548	−9.8	63
6,000	30	486	−13.0	37	30	483	−16.6	45	25	489	−11.0		28	484	−13.4	39	28	490	−9.8		30	486	−12.5	43	30	481	−16.0	63
7,000	29	426	−20.1		30	422	−23.6		24	429	−18.0		28	424	−20.5		28	430	−17.0		29	425	−19.3	47	29	420	−22.9	56
8,000	29	371	−27.3		30	367	−31.0		23	374	−25.4		27	370	−27.8		27	375	−24.7		29	371	−26.1		29	366	−29.9	
9,000	29	322	−35.2		30	318	−38.7		23	325	−33.0		27	321	−35.3		27	326	−32.5		29	322	−33.4		29	317	−37.4	
10,000	28	279	−42.2		28	274	−46.5		23	282	−40.4		27	278	−42.6		26	282	−40.1		27	279	−40.7		29	274	−44.5	
11,000	28	240	−48.8		28	235	−52.3		22	243	−48.1		27	239	−49.1		25	243	−47.0		27	240	−47.8		29	235	−50.3	
12,000	28	206	−54.3		27	201	−56.1		20	208	−55.5		27	205	−54.3		24	209	−53.2		26	206	−54.0		28	202	−55.0	
13,000	28	176	−57.4		27	172	−57.6		16	177	−60.8		26	175	−57.4		21	178	−58.3		25	176	−58.1		27	172	−58.4	
14,000	27	150	−59.4		22	147	−58.1		11	150	−63.2		24	149	−59.1		19	152	−60.9		22	150	−60.8		25	147	−59.3	
15,000	20	127	−59.8		13	125	−56.6		10	127	−64.6		22	127	−59.9		14	130	−62.9		17	127	−61.6		16	125	−58.6	
16,000	16	108	−59.5		10	107	−58.3		6	109	−64.2		18	108	−60.3		8	110	−65.1		10	108	−61.3		9	106	−58.0	
17,000	12	92	−59.8		5	91	−57.4						12	93	−60.5		6	93	−65.0		5	91	−60.9					
18,000													5	78	−57.9													

See footnotes at end of tables.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1945*—Continued

Altitude (meters) m. s. l.	Rapid City, S. Dak. (981 m.)				St. Louis, Mo. (171 m.)				St. Paul, Minn. (225 m.)				San Antonio, Tex. (240 m.)				San Juan, P. R. (15 m.)				Santa Maria, Calif. (71 m.)				Sault Ste. Marie, Mich. (221 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	901	12.8	82	30	993	20.5	78	30	986	16.2	72	30	983	26.9	72	30	1,015	26.1	84	30	1,005	13.8	84	30	988	11.1	80
500					30	956	19.3	75	30	955	15.7	64	30	954	25.5	72	30	961	22.5	81	30	956	13.6	79	30	956	13.6	63
1,000	30	899	12.8	81	30	902	16.6	74	30	900	12.4	65	30	901	22.2	73	30	907	19.2	78	30	901	17.2	47	30	901	11.7	61
1,500	30	847	11.5	69	30	850	14.3	70	30	848	9.3	67	30	851	20.0	66	30	856	16.9	65	30	850	16.8	38	30	848	8.5	64
2,000	30	797	8.4	69	30	801	12.5	58	30	798	5.7	68	30	802	17.5	51	30	806	15.3	51	30	800	13.8	37	30	798	5.7	59
2,500	30	751	5.4	71	30	755	9.9	53	30	750	3.5	56	30	757	15.2	33	30	760	12.7	43	30	754	10.7	34	30	751	3.1	62
3,000	30	706	2.4	70	30	710	7.1	50	30	705	1.4	51	30	713	12.4	25	30	716	9.7	37	30	710	7.8	29	30	705	0.6	58
4,000	30	623	−3.9	68	30	629	1.3	46	30	622	−3.8	46	30	632	6.2	25	30	634	4.1	33	29	628	1.0	31	29	623	−4.8	51
5,000	30	548	−10.1	65	30	554	−5.3	52	29	548	−9.8	47	29	559	−1.4	30	30	560	−1.7	31	29	554	−5.7	----	28	547	−10.7	48
6,000	30	481	−16.7	64	30	487	−12.6	49	29	480	−16.1	45	29	492	−8.1	----	30	493	−7.5	32	28	487	−12.2	----	27	480	−17.0	----
7,000	30	420	−23.9	58	29	427	−18.6	----	29	420	−23.4	----	28	432	−14.7	----	30	434	−14.1	38	28	427	−19.4	----	27	419	−24.2	----
8,000	30	366	−31.6	63	28	372	−26.0	----	28	366	−30.7	----	28	378	−22.1	----	29	379	−21.1	47	28	372	−27.2	----	27	365	−31.4	----
9,000	29	317	−39.2	----	27	323	−33.8	----	28	317	−38.1	----	28	329	−29.8	----	29	330	−28.6	----	28	322	−35.0	----	27	316	−38.7	----
10,000	28	274	−46.8	----	27	280	−41.4	----	26	273	−45.4	----	27	285	−37.1	----	28	287	−35.8	----	28	279	−42.4	----	27	273	−45.5	----
11,000	27	235	−52.2	----	27	241	−48.5	----	26	235	−51.2	----	27	246	−44.4	----	28	248	−43.7	----	28	240	−49.3	----	26	234	−51.0	----
12,000	26	201	−55.2	----	26	206	−54.5	----	26	201	−55.4	----	27	212	−51.5	----	27	213	−51.6	----	28	205	−54.9	----	26	201	−54.0	----
13,000	24	171	−55.5	----	22	177	−59.3	----	26	171	−56.3	----	27	181	−57.8	----	26	182	−59.3	----	28	175	−58.5	----	26	172	−55.7	----
14,000	20	147	−56.6	----	15	151	−62.3	----	22	147	−57.0	----	23	154	−62.2	----	23	155	−66.8	----	27	150	−60.7	----	26	147	−55.9	----
15,000	15	125	−57.0	----	11	128	−62.3	----	19	125	−57.1	----	18	131	−66.3	----	19	131	−72.2	----	26	127	−62.8	----	21	125	−56.3	----
16,000	10	107	−57.1	----	7	109	−62.2	----	13	106	−56.8	----	17	111	−69.3	----	10	110	−74.8	----	19	108	−63.6	----	17	107	−56.3	----
17,000	5	92	−57.7	----					6	91	−56.6	----	7	93	−69.8	----					13	92	−63.5	----	12	91	−56.0	----
18,000									6	77	−56.4	----									5	77	−62.0	----	10	78	−56.0	----
19,000									6	66	−56.0	----													8	67	−56.1	----
20,000																									6	57	−54.8	----
21,000																									6	49	−53.8	----
22,000																									5	42	−53.3	----

Altitude (meters) m. s. l.	Spokane, Wash. (598 m.)				Swan Island, W. I.[1] (10 m.)				Tacubaya, Mexico (2,306 m.)				Tampa, Fla. (3 m.)				Tatoosh Island, Wash. (31 m.)				Toledo, Ohio (191 m.)				Washington, D. C. (25 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	30	943	18.8	53					30	774	17.7	62	30	1,016	25.8	82	30	1,016	11.5	87	30	992	17.0	82	30	1,012	21.5	75
500													30	961	23.5	76	30	961	9.4	77	30	957	17.0	72	30	959	20.0	65
1,000	30	900	16.2	44									30	908	21.0	70	30	904	7.5	70	30	902	14.5	71	30	904	17.3	63
1,500	30	848	12.1	47									30	856	18.1	67	30	850	5.6	63	30	850	11.5	74	30	852	14.1	64
2,000	30	798	7.8	53									30	807	14.9	63	30	800	3.8	49	30	800	8.6	68	30	803	10.7	61
2,500	30	751	3.6	57					30	756	16.3	61	30	761	12.0	56	30	752	1.2	41	30	754	5.9	64	30	756	7.6	62
3,000	30	706	−0.2	58					30	713	12.6	64	30	716	9.0	52	30	707	−1.5	36	30	708	3.7	56	30	711	4.8	54
4,000	30	622	−6.6	61					30	632	5.2	71	29	634	2.9	49	30	622	−7.3	41	30	626	−1.4	54	30	629	−0.6	51
5,000	30	547	−12.8	54					30	558	−1.4	79	28	560	−2.8	42	30	547	−13.4	48	29	552	−7.3	53	29	554	−6.3	53
6,000	29	479	−18.9	46					29	492	−7.2	66	27	493	−8.4	42	30	479	−19.8	52	29	484	−13.5	51	28	487	−12.2	52
7,000	29	419	−25.7	52					28	432	−12.5	63	27	433	−14.8	----	30	418	−26.3	----	29	424	−20.0	----	28	427	−18.6	----
8,000	29	364	−33.0	----					28	378	−19.0	----	25	378	−21.9	----	29	363	−33.3	----	29	370	−27.0	----	28	373	−25.7	----
9,000	29	315	−40.2	----					26	330	−26.2	----	23	329	−29.0	----	28	314	−40.2	----	29	321	−34.4	----	28	324	−33.1	----
10,000	25	272	−46.5	----					24	287	−33.6	----	23	286	−36.6	----	27	271	−46.7	----	28	278	−41.5	----	25	281	−40.6	----
11,000	24	234	−52.6	----					23	248	−41.5	----	21	246	−44.9	----	26	233	−51.5	----	27	240	−48.4	----	24	242	−47.8	----
12,000	23	200	−55.3	----					18	214	−49.3	----	20	212	−52.6	----	25	199	−54.3	----	26	206	−54.0	----	24	207	−54.6	----
13,000	19	170	−56.0	----					11	183	−57.4	----	17	181	−60.1	----	24	170	−54.3	----	25	176	−58.2	----	22	177	−60.4	----
14,000	16	146	−55.6	----									15	154	−65.6	----	24	145	−53.8	----	21	150	−59.8	----	20	150	−64.0	----
15,000	12	125	−56.3	----									7	130	−70.8	----	18	124	−54.2	----	18	128	−60.8	----	10	128	−66.4	----
16,000	9	108	−56.7	----									5	110	−73.9	----	15	106	−54.5	----	10	109	−61.6	----	7	109	−65.1	----
17,000																	13	91	−54.2	----								
18,000																	7	78	−53.5	----								
19,000																	5	67	−53.4	----								

[1] Data not received.

NOTE.—All observations scheduled between 10 p. m. and midnight, E. S. T. (0300 and 0500 G. C. T.), except at Mazatlan and Merida, where they are taken near 9 p. m. E. S. T. (0200 G. C. T.).

"Number of observations" refers to pressure only. (In a few cases temperature or humidity data may be missing for one or more levels of some observations.) Relative humidity data are not published for levels having a corresponding mean temperature below −20° C.

All relative humidity observations are obtained by electric hygrometer and have been adjusted to compensate for the values occurring below the operating range of the humidity element. For explanation of the adjustment see article entitled "Curve Method for Obtaining Monthly Means of Relative Humidity," p. 241, MONTHLY WEATHER REVIEW, December 1944.

None of the means included in these tables are based on less than 15 surface or 5 standard level observations.

Data for Havana, Cuba, and the current data for Swan Island, West Indies, will appear in a later issue.

TABLE 2.—*Free-air resultant winds based on pilot balloon observations made near 5 p. m., E. S. T. (2200 G. C. T.) during June 1945. Directions given in degrees from north (N=360°, E=90°, S=180°, W=270°). Velocities in meters per second*

Altitude (meters) m. s. l.	Abilene, Tex. (538 m.)			Albuquerque, N. Mex. (1,630 m.)			Atlanta, Ga. (299 m.)			Billings, Mont. (1,095 m.)			Bismarck, N. Dak. (512 m.)			Boise, Idaho (868 m.)			Brownsville, Tex. (7 m.)			Buffalo, N. Y. (220 m.)			Burlington, Vt. (132 m.)			Charleston, S. C. (16 m.)			Cincinnati, Ohio (152 m.)			Denver, Colo. (1,627 m.)			El Paso, Tex. (1,196 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	158	5.3	30	232	4.6	30	257	2.8	29	289	1.8	30	222	1.6	30	317	4.4	30	133	7.6	29	254	2.7	30	291	1.4	29	195	1.7	30	191	1.1	29	72	2.0	29	233	3.7
500							30	257	3.2										30	144	9.3	29	254	4.2	30	295	1.4	29	197	4.1	30	233	2.4						
1,000	30	170	6.4				30	255	3.3				29	250	3.0	30	310	4.7	27	153	7.9	29	253	4.9	30	281	3.3	29	227	3.8	30	241	4.2						
1,500	30	179	6.3				30	260	4.1	29	307	2.4	26	251	2.8	30	312	5.1	21	158	6.5	27	271	5.7	29	292	5.1	28	252	3.1	28	246	6.4				29	224	3.2
2,000	30	197	7.1	30	230	5.0	27	266	5.0	27	301	3.5	24	264	3.4	30	306	5.3	20	163	4.7	24	269	6.4	23	300	6.7	27	269	4.9	24	249	7.8	29	65	2.4	29	231	3.5
2,500	29	207	6.5	30	225	4.7	25	272	5.9	25	290	5.2	20	261	5.1	29	303	5.0	19	162	4.0	21	280	8.2	20	305	8.1	26	272	6.3	21	251	9.0	29	78	1.4	29	229	4.1
3,000	25	220	6.7	30	224	5.5	20	265	6.0	20	279	7.6	16	270	6.4	26	298	5.4	18	166	2.4	20	272	8.8	16	305	10.5	26	277	6.9	18	264	10.0	28	230	1.0	29	235	6.0
4,000	24	229	6.3	30	246	6.6	10	271	7.1	17	275	10.9	13	273	9.5	22	282	7.4	18	149	1.1	16	285	10.8	12	309	14.0	23	273	6.3	11	272	9.4	25	263	6.0	28	243	8.9
5,000	23	260	6.7	29	256	9.8				10	261	12.0				19	279	8.6	17	202	1.0	13	283	12.9				16	262	5.6				22	264	10.3	25	250	9.1
6,000	17	268	8.5	26	262	12.9										17	290	8.8	15	293	1.1	11	288	16.3				11	247	2.4				18	266	12.0	20	253	10.3
8,000	15	263	11.7	21	263	14.4													10	294	5.6													13	272	15.9	12	259	13.4
10,000	10	260	15.0	18	265	19.3																																	
12,000				16	263	24.9																																	

Altitude (meters) m. s. l.	Ely, Nev. (1,910 m.)			Grand Junction, Colo. (1,413 m.)			Greensboro, N. C. (271 m.)			Havre, Mont. (767 m.)			Jacksonville, Fla. (16 m.)			Joliet, Ill. (178 m.)			Las Vegas, Nev. (573 m.)			Little Rock, Ark. (88 m.)			Medford, Oreg. (410 m.)			Miami, Fla. (12 m.)			Mobile, Ala. (66 m.)			Nashville, Tenn. (194 m.)			New York, N. Y. (15 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	315	1.7	29	292	1.7	28	229	2.1	26	278	2.1	29	120	3.2	30	223	2.0	30	192	0.9	30	179	2.3	30	314	2.6	30	135	4.2	28	208	2.7	30	248	1.7	30	196	7.3
500							28	246	2.8				29	151	3.1	30	235	2.3				30	182	3.9	30	318	2.9	30	151	5.2	28	204	3.4	30	232	3.0	29	261	2.6
1,000							28	250	3.5	26	277	3.1	28	186	2.0	27	214	3.2	30	177	1.6	29	203	3.9	30	325	3.1	30	153	3.6	25	217	2.6	29	239	4.5	28	276	4.8
1,500				29	298	2.8	27	248	3.9	26	280	3.6	28	240	2.4	24	220	4.9	30	195	2.0	27	217	5.5	30	323	2.6	29	146	2.1	20	270	1.2	29	238	6.1	27	284	6.4
2,000	30	321	1.7	29	286	4.2	25	260	5.3	24	285	4.5	28	258	3.3	21	240	6.5	30	212	2.8	18	248	5.9	29	328	1.8	26	132	1.2	15	290	1.4	28	254	7.5	23	290	8.9
2,500	30	289	2.4	29	259	5.6	22	266	5.6	17	281	7.2	25	270	4.0	16	254	5.8	30	232	3.2	17	254	6.7	26	325	1.7	25	136	1.7	12	320	1.0	27	253	8.5	21	294	10.0
3,000	30	273	3.0	29	243	6.9	20	267	6.9	13	281	8.0	23	271	4.0	12	251	8.2	30	250	3.5	15	253	8.2	25	331	2.9	25	148	1.6	11	283	0.8	24	245	8.5	14	308	6.5
4,000	26	273	4.3	28	236	8.4	16	271	11.5				18	243	2.6				30	262	4.8	12	257	10.5	24	327	5.0	21	188	2.1				20	243	10.1			
5,000	21	285	8.7	21	250	8.6	13	276	2.2				13	268	2.6				27	269	7.4	10	257	8.9	22	319	9.4	18	119	1.1				14	251	9.2			
6,000	20	292	12.7	13	250	12.9	11	262	11.6				13	281	2.0				27	272	9.6				20	312	10.5	16	148	1.4				11	255	7.8			
8,000	16	282	18.3																21	287	13.4				14	306	11.5	13	172	1.1									
10,000	13	290	18.2																18	285	18.6																		
12,000																			12	287	23.7																		

Altitude (meters) m. s. l.	Oakland, Calif. (8 m.)			Oklahoma, City, Okla. (396 m.)			Omaha, Nebr. (306 m.)			Phoenix, Ariz. (338 m.)			Rapid City, S. Dak. (982 m.)			St. Louis, Mo. (181 m.)			St. Paul, Minn. (225 m.)			San Antonio, Tex. (240 m.)			San Diego, Calif. (15 m.)			Saulte Ste. Marie, Mich. (225 m.)			Seattle, Wash. (116 m.)			Spokane, Wash. (603 m.)			Washington, D. C. (24 m.)		
	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity	Observations	Direction	Velocity
Surface	30	274	5.5	28	168	4.4	29	276	1.2	30	261	1.3	27	347	0.6	29	146	1.2	29	241	1.5	30	144	3.4	29	248	4.2	29	288	2.7	30	258	1.9	28	228	2.8	30	239	2.2
500	30	289	4.5	28	173	4.9	29	257	1.2	30	265	2.3				29	186	2.1	29	216	0.8	30	147	4.8	29	255	2.7	29	292	3.2	30	257	1.7				30	234	3.3
1,000	29	317	2.7	28	180	5.8	27	277	1.3	30	259	2.9	27	349	0.7	27	214	4.6	28	225	2.7	30	153	4.6	23	200	0.7	28	287	2.7	29	262	2.2	28	243	3.9	30	244	4.2
1,500	29	333	3.0	26	204	7.6	21	223	3.3	30	240	3.3	27	303	1.0	24	225	6.4	26	232	3.9	29	164	4.0	20	259	0.9	24	290	2.3	27	258	1.5	28	244	4.2	29	268	5.4
2,000	29	336	3.1	24	226	8.6	20	246	4.7	30	228	3.9	22	217	2.0	20	247	7.7	24	241	4.6	25	179	4.4	19	279	1.3	24	286	2.2	19	263	1.3	28	253	4.1	28	277	7.6
2,500	28	344	3.2	22	232	8.6	20	251	6.1	30	218	4.6	17	278	5.1	17	258	8.6	16	280	4.3	22	193	4.4	18	288	1.5	22	282	3.6	17	279	2.6	25	259	4.4	28	278	9.2
3,000	28	340	3.2	17	249	8.0	17	254	7.4	30	223	5.3	12	270	8.2	13	253	8.7	14	273	6.0	17	201	3.5	18	293	1.5	21	276	5.2	14	294	3.7	14	255	5.4	24	276	11.1
4,000	27	320	4.9	14	268	10.4	14	253	10.4	30	240	6.8							12	278	9.0	14	282	1.4	14	304	3.6	18	278	8.2	14	288	6.6	12	259	7.8	20	284	13.5
5,000	25	311	6.1	11	258	15.9	12	240	12.0	30	243	8.2										10	320	1.6	13	295	6.4	15	286	9.8	11	284	8.8				17	295	10.2
6,000	24	307	6.9	10	262	17.6	10	252	10.5	29	255	11.2													12	291	9.6	14	288	11.7							16	292	10.9
8,000	22	308	11.1							25	261	13.8													10	270	16.3	11	286	17.5									
10,000	17	313	12.8							18	279	19.1																											
12,000	12	284	12.7																																				

TABLE 3.—*Maximum free-air wind velocities (m. p. s.) for different sections of the United States based on pilot balloon observations during June 1945*

Section	Surface to 2,500 meters (m. s. l.)					Above 2,500 to 5,000 meters (m. s. l.)					Above 5,000 meters (m. s. l.)				
	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station	Maximum velocity	Direction	Altitude (m.) m. s. l.	Date	Station
Northeast [1]	34.6	NW.	2,265	1	Boston, Mass	44.8	NW.	5,000	1	Boston, Mass	72.0	WNW.	6,850	1	Boston, Mass.
East-Central [2]	38.8	SW.	2,161	18	Greensboro, N. C	47.0	WSW.	3,829	3	Raleigh, N. C	57.6	W.	14,709	23	Raleigh, N. C.
Southeast [3]	31.0	W.	1,242	3	Spartanburg, S. C	32.9	SW.	2,862	6	Spartanburg, S. C	36.0	SW.	11,552	20	Spartanburg, S. C.
North-Central [4]	34.1	W.	1,928	29	Huron, S. Dak	34.8	WSW.	3,912	14	Marquette, Mich	53.5	N.	11,583	20	Fargo, N. Dak.
Central [5]	49.2	SSW.	1,790	27	Dodge City, Kans	40.0	SW.	2,761	26	Omaha, Nebr	52.5	W.	10,118	26	Goodland, Kans.
South-Central [6]	44.1	SSW.	1,746	1	Oklahoma City, Okla	32.0	WSW.	3,413	1	Memphis, Tenn	44.0	SW.	9,681	1	Oklahoma City, Okla.
Northwest [7]	36.6	WNW.	1,701	26	Ellensburg, Wash	42.3	W.	4,306	12	Butte, Mont	66.0	W.	9,536	11	Ellensburg, Wash.
West-Central [8]	31.6	W.	2,500	27	Rock Springs, Wyo	52.0	N.	4,023	27	Grand Junction, Colo	64.4	W.	7,935	14	Ely, Nev.
Southwest [9]	29.3	NNW.	2,200	13	Sandberg, Calif	40.7	WSW.	3,564	8	Winslow, Ariz	60.0	SW.	14,455	27	Tucson, Ariz.

[1] Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, and northern Ohio.
[2] Delaware, Maryland, Virginia, West Virginia, southern Ohio, Kentucky, eastern Tennessee, and North Carolina.
[3] South Carolina, Georgia, Florida, and Alabama.
[4] Michigan, Wisconsin, Minnesota, North Dakota, and South Dakota.
[5] Indiana, Illinois, Iowa, Nebraska, Kansas, and Missouri.
[6] Mississippi, Arkansas, Louisiana, Oklahoma, Texas (except El Paso), and western Tennessee.
[7] Montana, Idaho, Washington, and Oregon.
[8] Wyoming, Colorado, Utah, northern Nevada, and northern California.
[9] Southern California, southern Nevada, Arizona, New Mexico, and extreme west Texas.

LATE REPORTS FOR SWAN ISLAND, WEST INDIES

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	March 1945				May 1945			
	Swan Island, West Indies (10 m.)				Swan Island, West Indies (10 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	1,015	24.9	79	31	1,012	26.0	82
500	31	960	21.3	81	31	958	22.2	82
1,000	31	906	18.5	70	31	904	19.7	68
1,500	31	854	15.4	67	31	852	16.9	62
2,000	31	805	13.1	53	31	803	14.2	57
2,500	31	759	11.3	39	31	757	11.6	47
3,000	31	714	9.8	21	31	712	9.0	46
4,000	31	633	5.0	.....	31	632	3.8	39
5,000	31	559	−1.2	.....	29	557	−2.2	42
6,000	31	492	−7.6	.....	29	491	−8.2	42
7,000	31	433	−14.7	.....	29	431	−14.6	43
8,000	31	378	−21.6	.....	28	377	−21.3	.....
9,000	31	329	−28.9	.....	28	329	−28.6	.....
10,000	31	286	−36.2	.....	28	285	−36.4	.....
11,000	31	247	−43.6	.....	28	246	−44.8	.....
12,000	31	213	−50.9	.....	28	211	−53.1	.....
13,000	31	182	−57.5	.....	28	180	−61.1	.....
14,000	29	155	−63.2	.....	26	153	−68.2	.....
15,000	28	131	−68.2	.....	14	129	−72.2	.....
16,000	18	111	−72.7	.....	5	109	−75.7	.....
17,000	7	94	−75.1	.....				

REVISED DATA FOR ELY, NEV.

Raob data for Ely, Nev., for the months of March and April 1945, published in the Monthly Weather Review, were affected in the upper levels by a drift in the calibration of the radiosonde recorder. These data have accordingly been recomputed, and the revised data are shown in the following tables.

TABLE 1.—*Mean free-air barometric pressure in millibars, temperature in degrees centigrade, and relative humidities in percent, obtained by radiosondes during June 1945*

STATIONS AND ELEVATIONS IN METERS ABOVE SEA LEVEL

Altitude (meters) m. s. l.	March 1945 (1,908 m.)				April 1945 (1,908 m.)			
	Number of observations	Pressure	Temperature	Relative humidity	Number of observations	Pressure	Temperature	Relative humidity
Surface	31	804	−2.5	79	30	807	4.2	62
500	.....	.....	.....	.....	.....	.....	.....	.....
1,000	.....	.....	.....	.....	.....	.....	.....	.....
1,500	.....	.....	.....	.....	.....	.....	.....	.....
2,000	31	796	−1.3	72	30	798	4.4	55
2,500	31	747	−3.2	64	30	751	1.2	51
3,000	31	701	−6.9	70	30	705	−2.8	58
4,000	31	616	−12.8	59	30	620	−10.5	64
5,000	31	539	−19.4	.....	30	544	−17.1	.....
6,000	31	471	−27.1	.....	30	475	−23.6	.....
7,000	31	408	−34.8	.....	30	414	−30.9	.....
8,000	30	353	−41.3	.....	29	358	−37.4	.....
9,000	29	304	−47.6	.....	27	310	−43.5	.....
10,000	27	262	−52.2	.....	25	267	−50.3	.....
11,000	23	225	−55.3	.....	24	229	−55.4	.....
12,000	22	192	−56.7	.....	21	195	−59.5	.....
13,000	18	164	−55.9	.....	17	166	−59.9	.....
14,000	13	140	−55.8	.....	12	141	−58.4	.....
15,000	6	120	−56.3	.....	6	121	−59.1	.....
16,000	5	102	−58.2	.....	.....	.....	.....	.....

RIVER STAGES AND FLOODS

By BENNETT SWENSON

Precipitation during June was above normal from the Appalachians westward to the Rockies except in the Southwest and the extreme North-Central States. Rainfall was excessive in the central Mississippi Valley and in the Utah-Wyoming-Colorado area, with monthly totals ranging from twice to four times the normal. It was particularly dry in the Western and Southwestern States, notably in southern New Mexico and Arizona, where the precipitation was less than 20 percent of normal. Rainfall was somewhat below normal in some Middle Atlantic and South Atlantic States, as well as in portions of the Northeast and the Lake Region.

Floods occurred over a wide area from eastern Texas northward and northeastward to the middle Missouri and the upper Mississippi River basins and to lower Michigan. A number of flash floods in widely separated areas was reported.

St. Lawrence drainage.—Early in June a two-day rainfall, totalling 4 inches in a belt from Bay City to Ludington, Mich., caused flooding in the Muskegon, Pere Marquette, and Tittabawassee Rivers. New record-high stages were observed at some points. The Tittabawassee River crested at Midland, Mich., at 21.8 feet on June 3. The highest stage of record, 23.4 feet, occurred in March 1916 at that point.

The St. Marys River at Decatur, Ind., exceeded flood stage from June 18 to 22, with a maximum stage of 16.8 feet on the 21st.

Atlantic Slope drainage.—Excessive local rains on June 18 in western Connecticut caused considerable flood damage on small tributaries of the Housatonic River near Cornwall Bridge, Conn. Another intense local storm on June 25–26 caused serious flood damage in small streams in the vicinity of Rutland, Vt.

East Gulf of Mexico drainage.—The Pearl River rose slightly above flood stage for short periods at Jackson, Miss., and Pearl River, La., during the month. The

flooding was caused principally by local rains, occurring mainly from June 11–19.

Upper Mississippi Basin.—Minor overflows developed in the lower Chippewa River and in the Kickapoo River from concentrations of heavy rains on June 1–2.

Floods in the Raccoon and lower Des Moines Rivers during June were continuations of those that occurred in the latter part of May. Periods of prolonged rainfall, combined with low temperatures which prevailed in April and May, persisted during June. The June floods, standing alone, were not out of the ordinary. However, the total number of individual overflows and the total number of days above flood stage during any calendar year were exceeded at some stations in the period March–June, inclusive. At Ottumwa, Iowa, there were 41 days with stages above bankfull, equalling the record of 1915, and exceeding by 6 the number of days in 1944. At Tracy, Iowa, stages were above bankfull a total of 40 days.

The Illinois River and the Salt, Fox, and Meramec Rivers in Missouri also were in flood. In the lower Meramec River stages were within several feet of the record flood of August 1915, and upstream at Sullivan, Mo., the crest was only 0.6 foot lower than the all-time high in 1915. The Bourbeuse River at Union, Mo., crested at 19.1 feet on June 10, within 0.1 foot of the record flood of October 1919, at that place.

Moderate flood stages prevailed in the Mississippi River at and below Burlington, Iowa. At St. Louis, Mo., the river has passed flood stage 4 times during the Spring, in consecutive months. Previously, three consecutive months with a stage of 30 feet (flood stage) or higher had been the record; these were recorded in 1892, 1915, 1927, and 1943. Crest stages at St. Louis during 1945 were as follows: March, 32.4; April, 33.9; May, 32.1; and June, 35.3 feet.

At Cape Girardeau, Mo., the crest of 38.2 feet on June 15 has been exceeded in only 4 previous years.

Missouri Basin.—The Missouri River exceeded flood stage from Nebraska City, Nebr., to the mouth, and most of the tributaries from Sioux City, Iowa, downstream were in flood. Heavy to locally excessive rains on June 15 over northern Kansas, eastern Nebraska, western Iowa, and northern Missouri caused rapid rises and considerable overflow in this area. Stages were generally below those of April this year and the floods of 1943 and 1944. Notable exceptions were the Delaware River in Kansas and the headwaters of the Gasconade River in Missouri, where record or near record stages were reached.

On June 8–9, excessive rainfall averaged 3 inches or more over the Gasconade and Meramec River basins, with local amounts of 6 inches or more. The heavy rains centered over the headwaters of the Gasconade in the vicinity of Newburg, Mo. Five lives were reported lost, and considerable property damage occurred in Newburg.

Ohio Basin.—Floods during the month were confined to the Scioto River in Ohio, the Wabash River system, and the extreme lower Ohio River at Dam 53 and Cairo, Ill. No excessive stages were reported. The principal feature was the prolonged rainy spell which resulted in long periods of above flood stage, especially in the White and lower Wabash Rivers. At Hazleton, Ind., the river was above flood stage a total of 72 days during the past 4 months, and at Mt. Carmel, Ill., 63 days.

White, Red, and Arkansas Basins.—Persistent rainstorms in Kansas, Oklahoma, Missouri, and Arkansas have kept streams in this area at above normal stages, and there have been repeated and recurring floods. For the White River readings have been almost continuously above flood stage since February.

Heavy rains on June 9–10 occurred along the Arkansas River below Muskogee, Okla., and resulted in high stages in the Arkansas and Poteau Rivers. At Fort Smith, Ark., an all-time record rainfall of 4.66 inches occurred in 2 hours and 14 minutes, and a 24-hour total of 10.47 inches occurred at Webbers Falls, Okla.

The floods in the Red River Basin were caused by excessive rains over the area below Denison Dam and locally heavy rains in the Lake Texahoma watershed. Precipitation ranged from 2.5 to 8 inches on June 12–14, followed by 2 to 3 inches on June 17–18. Several stations in southeastern Oklahoma recorded 7.8 to 13.7 inches of rain during the month.

West Gulf of Mexico drainage.—Considerable overflows occurred in the Sabine River, and moderate flood stages prevailed in the Trinity River.

Pacific Slope drainage.—The annual high water in the Kings River from melting snow occurred during mid-June. The water was diverted into canals for irrigation purposes, and no damage occurred.

The Columbia River reached its annual crest at Vancouver, Wash., on June 10–11, with a reading of 18.4 feet. There was no damage except erosion of river banks, flooding of low-lying pastures, and some delay to shipbuilding.

FLOOD-STAGE REPORT FOR JUNE 1945

[All dates in June unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest [1]	
		From—	To—	Stage	Date
ST. LAWRENCE DRAINAGE					
Lake Huron					
Tittabawassee: Midland, Mich.	*Feet* 18	2	5	*Feet* 21.8	June 3
Lake Erie					
St. Marys: Decatur, Ind.	13	18	23	16.7	21
ATLANTIC SLOPE DRAINAGE					
Susquehanna: Oneonta, N. Y.	12	May 14	May 14	12.1	May 14
		May 18	May 18	12.4	May 18
EAST GULF OF MEXICO DRAINAGE					
Pearl:					
Jackson, Miss.	18	15	16	18.7	16
		18	18	18.7	18
		20	22	18.8	21
Pearl River, La.	12	21	25	12.8	23
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Chippewa: Durand, Wis.	11	4	6	11.5	5
Zumbro: Thielman, Minn.	35	2	3	35.8	2
Rock: Moline, Ill.	10	30	July 4	10.2	June 30–July 2
Cedar: Waterloo, Iowa	12	2	3	12.8	2
Raccoon:					
Jefferson, Iowa	12	May 23	May 26	13.1	May 24
		May 29	May 29	12.0	May 29
		1	6	14.2	3
		10	11	13.4	10
VanMeter, Iowa	13	May 31	1	15.2	May 31
		4	7	15.7	7
		13	13	13.0	13
Des Moines:					
Tracy, Iowa	14	May 25	11	17.6	May 27
				14.6	3
				16.2	7–8
		21	21	14.2	21
Eddyville, Iowa	15	May 25	12	18.6	May 27
				17.4	8
				17.2	11
		15	18	15.5	16–17
		21	21	15.8	21
Ottumwa, Iowa	9	May 25	12	12.1	May 28
				11.0	6
				10.9	9
				10.8	11
		16	17	9.2	16
Fox: Wayland, Mo.	15	16	17	17.3	17
Salt: New London, Mo.	19	May 17	May 19	22.6	May 18
		8	11	23.3	10
		17	17	19.2	17

See footnotes at end of tables.

FLOOD-STAGE REPORT FOR JUNE 1945—Continued

[All dates in June unless otherwise specified]

River and station	Flood stage	Above flood stages—dates From—	To—	Crest[1] Stage	Date
MISSISSIPPI SYSTEM—continued					
Upper Mississippi Basin—Continued					
Illinois:	*Feet*			*Feet*	
Morris, Ill.	13	May 15	May 21	15.4	May 18
Peoria, Ill.	18	May 18	May 27	19.6	May 21
				19.8	May 23
Havana, Ill.	14	May 15	7	18.2	May 23
		18	25	15.0	20-21
				19.4	May 24
Beardstown, Ill.	14	May 15	July 4	15.6	14
				17.6	22
Bourbeuse: Union, Mo.	12	9	11	19.1	10
Meramec:					
Sullivan, Mo.	11	May 30	May 30	12.6	May 30
		7	12	32.4	9
Pacific, Mo.	11	May 30	----------	15.0	1
		8	15	28.5	10
Valley Park, Mo.	14	1	2	15.0	1
		9	15	33.0	11
Mississippi:					
Gordons Ferry, Iowa.	13	3	14	13.5	11-12
Keokuk, Iowa.	12	3	20	14.3	10
				17.0	16
Gregory Landing, Mo.	12	May 15	May 21	15.1	May 18
		May 31	22	14.6	10-11
				16.8	16
Quincy, Ill.	14	2	22	17.7	10-11
				19.6	17
Hannibal, Mo.	13	May 28	25	13.8	May 31
				18.3	10-11
				19.8	18
Louisiana, Mo.	12	May 25	24	12.3	May 29-31
				17.9	11
				18.5	18
		26	(2)	12.4	27
Grafton, Ill.	18	May 17	May 24	21.9	May 21-22
		8	27	24.0	13
				23.2	21
St. Louis, Mo.	30	9	26	35.3	13
				33.9	23
Chester, Ill.	27	Apr. 15	May 2	33.6	Apr. 23
		May 19	May 26	30.6	May 23
		May 29	4	28.0	2
		9	29	34.4	14
				33.0	25
Cape Girardeau, Mo.	32	Apr. 13	3	37.9	Apr. 22-24
		10	29	38.2	15
				37.2	24-26
Missouri Basin					
Solomon:					
Beloit, Kans.	18	26	27	20.3	27
Minneapolis, Kans.	26	May 22	May 23	28.5	May 22
		16	16	27.0	16
Niles, Kans.	24	May 22	May 26	28.0	May 25
		18	18	24.2	18
Saline: Tescott, Kans.	25	May 22	May 24	28.0	May 23
		29	July 2	28.3	July 1
Smoky Hill: Lindsborg, Kans.	21	27	27	21.8	27
Republican:					
Guide Rock, Nebr.	9	1	2	9.4	1
		7	7	9.8	7
		25	26	9.7	25
Clay Center, Kans.	15	8	8	15.6	8
		16	16	16.3	16
Wakefield, Kans.	11	15	15	11.1	15
				12.9	May 15
Little Blue: Endicott, Nebr.	9	May 14	----------	13.2	May 23
				14.6	May 27
		16	----------	10.2	16
				9.4	19
Big Blue:					
Barnston, Nebr.	18	May 14	May 15	22.4	May 15
		May 19	May 23	28.0	May 22
		9	9	19.9	9
		16	16	18.7	16
Blue Rapids, Kans.	22	30	30	22.8	30
Kansas:					
Manhattan, Kans.	17	16	16	18.0	16
		30	30	18.0	30
Topeka, Kans.	21	16	17	22.5	16-17
Lecompton, Kans.	17	17	17	19.9	17
Lawrence, Kans.	18	17	17	20.1	17
Delaware: Valley Falls, Kans.	22	16	17	27.8	16
Thompson Fork: Trenton, Mo.	20	16	16	20.2	16
Grand:					
Gallatin, Mo.	20	May 15	May 19	30.2	May 17
		16	18	25.6	18
		May 14	May 21	31.0	May 17
Chillicothe, Mo.	18	May 26	May 28	19.2	May 26
				19.1	May 28
		8	12	28.0	10
		15	20	30.2	17

See footnotes at end of tables.

FLOOD-STAGE REPORT FOR JUNE 1945—Continued

[All dates in June unless otherwise specified]

River and station	Flood stage	Above flood stages—dates From—	To—	Crest[1] Stage	Date
MISSISSIPPI SYSTEM—continued					
Missouri Basin—Continued					
Grand—Continued.	*Feet*			*Feet*	
				19.6	May 19
		May 16	May 31	16.0	May 27
Brunswick, Mo.	12			15.1	May 29
		8	15	15.5	13
		16	24	20.6	20
Osage:					
Osawatomie, Kans.	28	May 29	1	32.1	May 30
LaCygne, Kans.	25	May 29	2	28.3	May 31
Trading Post, Kans.	24	May 30	3	25.8	2
Osceola, Mo.	20	Apr. 15	May 3	31.1	Apr. 17
		May 1	May 4	60.2	May 3
		May 6	May 6	60.0	May 6
Bagnell Dam (Lakeside), Mo.	60	May 8	May 8	60.1	May 8
		May 29	1	60.4	May 30
		8	11	60.5	10
		18	22	60.4	21
St. Thomas, Mo.	23	Apr. 15	May 1	31.1	Apr. 19
		May 30	May 31	23.4	May 31
		9	11	25.0	10
Big Sioux: Akron, Iowa.	12	12	20	15.2	13
				16.5	17
		May 27	May 28	14.6	May 27
Floyd: James, Iowa.	14	9	9	14.2	9
		10	13	16.6	12
		15	18	14.8	17
		26	30	16.7	28
Missouri:					
Nebraska City, Nebr.	15	16	18	16.1	17
St. Joseph, Mo.	17	16	17	17.2	17
Kansas City, Mo.	22	16	19	25.3	18
Lexington, Mo.	22	17	21	24.7	19
		May 16	May 19	20.4	May 18
		May 24	May 27	19.6	May 26
Waverly, Mo.	18	May 29	May 29	18.0	May 29
		16	22	22.1	19
		May 17	May 22	23.3	May 20
		May 25	May 28	21.7	May 27
Boonville, Mo.	21	10	12	21.1	12
		18	24	25.2	21
		May 20	May 21	23.2	May 20
Jefferson City, Mo.	23	19	24	24.8	22
		May 17	May 23	23.9	May 21
		May 25	1	23.0	May 31
Hermann, Mo.	21	8	15	25.6	11
		18	25	26.6	22
		Apr. 15	May 1	33.0	Apr. 21
		May 18	May 24	28.5	May 22
St. Charles, Mo.	25	May 26	3	27.3	May 30
		8	17	30.0	12
		18	26	30.5	24
Ohio Basin					
Scioto:					
LaRue, Ohio.	11	17	21	15.0	18
Prospect, Ohio.	10	18	21	12.1	20
Circleville, Ohio.	14	18	20	15.6	19
West Fork:					
Anderson, Ind.	10	16	20	14.0	18
Noblesville, Ind.	14	18	20	14.3	19
Elliston, Ind.	18	16	25	26.6	21
Edwardsport, Ind.	12	14	29	24.1	22
East Fork:					
Seymour, Ind.	14	18	22	16.4	19
Williams, Ind.	10	22	24	11.0	23
White:					
Petersburg, Ind.	16	17	29	23.5	24
Hazleton, Ind.	16	17	(2)	25.1	25
Wabash:					
Bluffton, Ind.	10	19	22	11.0	21
Wabash, Ind.	12	20	21	12.4	21
LaFayette, Ind.	11	18	22	13.3	20
Covington, Ind.	16	20	23	16.9	22
Terre Haute, Ind.	14	17	24	16.0	19
Vincennes, Ind.	14	17	26	17.1	22
Mt. Carmel, Ill.	17	18	30	23.1	25
New Harmony, Ind.	15	20	(2)	18.5	26-27
Ohio					
Dam No. 53, near Mound City, Ill.	42	18	28	43.4	26
Cairo, Ill.	40	14	30	44.6	26
White Basin					
Buffalo: Gilbert, Ark.	30	11	11	34.0	11
Current: Doniphan, Mo.	10	10	13	14.0	12
		18	20	12.6	19
Black:					
Leeper, Mo.	11	8	10	15.5	9
		----------	----------	18.9	9
Williamsville, Mo.	11	18	18	11.0	18
		9	15	20.8	10
Poplar Bluff, Mo.	16	17	21	17.8	19
Black Rock, Ark.	14	9	(2)	27.0	16, 18

FLOOD-STAGE REPORT FOR JUNE 1945—Continued

[All dates in June unless otherwise specified]

River and station	Flood stage	Above flood stages—dates From—	To—	Crest [1] Stage	Date
MISSISSIPPI SYSTEM—continued					
White Basin—Continued					
White:	*Feet*			*Feet*	
Cotter, Ark.	21	13	14	23.2	May 14
Calico Rock, Ark.	19	10	15	31.4	12
		17	17	19.0	17
Batesville, Ark.	23	10	20	34.9	12
				28.7	18
Newport, Ark.	26	12	28	32.2	14–15
				32.3	18
Augusta, Ark.	32	12	(2)	35.9	16–17
Georgetown, Ark.	21	Feb. 24	4	29.8	Mar. 9–10
				29.1	Mar. 26–27
				32.0	Apr. 4
				28.7	Apr. 20
				23.1	May 22–23
Des Arc, Ark.	24	11	(2)	25.2	16–20
		14	(2)	27.7	21
Clarendon, Ark.	26	Feb. 27	(2)	33.4	Mar. 14–16
				38.2	Apr. 9–10
				39.1	Apr. 24
				29.4	May 25–26
				35.5	23–24
St. Charles, Ark.	25	Mar. 2	(2)	38.6	Apr. 11–12
				39.2	Apr. 26–27
				27.2	May 26–29
				33.6	26–27
Arkansas Basin					
Neosho: Burlington, Kans.	27	30	(2)	28.2	30
North Canadian:					
Oklahoma City, Okla.	12	10	10	12.7	10
East Oklahoma City, Okla.	14	10	11	15.0	10
Poteau: Poteau, Okla.	21	----------	----------	35.1	12
				25.5	19
Petit Jean: Danville, Ark.	20	11	16	25.8	13
		18	20	21.3	19
Arkansas:					
Fort Smith, Ark.	22	10	15	26.1	13
Van Buren, Ark.	22	10	16	26.7	11, 13
Ozark, Ark.	22	11	15	25.8	11
Dardanelle, Ark.	22	10	17	29.3	12
Morrillton, Ark.	20	11	16	23.3	13
Little Rock, Ark.	23	12	15	24.0	13
Pine Bluff, Ark.	25	13	16	26.4	14
Red Basin					
Little Missouri: Boughton, Ark.	20	12	15	22.1	13
Saline: Benton, Ark.	20	12	13	21.6	12
Ouachita:					
Arkadelphia, Ark.	17	12	16	25.3	13
Camden, Ark.	26	13	23	38.8	16
Monroe, La.	40	Mar. 10	6	50.4	Apr. 15
Black: Jonesville, La.	50	Mar. 18	(2)	58.5	Apr. 28, 30
Little: Whitecliffs, Ark.	25	15	22	27.0	16
Sulphur:					
Hagansport, Tex.	38	12	17	42.4	13
Naples, Tex.	22	13	24	30.5	16
Cypress: Jefferson, Tex.	18	16	21	23.0	17
Red:					
Fulton, Ark.	25	14	25	26.6	15–16
				28.9	22
Grand Ecore, La.	33	24	28	33.7	26
Alexandria, La.	32	23	(2)	33.7	27
Lower Mississippi Basin					
Big Lake Outlet: Manila, Ark.	10	Feb. 23	(2)	15.8	Mar. 10–11
				17.5	Apr. 5–6
				16.7	Apr. 20–21
				15.2	May 14–15
				18.3	20–21

FLOOD-STAGE REPORT FOR JUNE 1945—Continued

[All dates in June unless otherwise specified]

River and station	Flood stage	Above flood stages—dates From—	To—	Crest [1] Stage	Date
MISSISSIPPI SYSTEM—continued					
Lower Mississippi Basin—Continued					
St. Francis:	*Feet*			*Feet*	
Fisk, Mo.	20	Mar. 24	5	23.7	Apr. 7–8
				24.6	Apr. 17
				23.5	May 2–3, 10
		22	(2)	22.7	2
St. Francis, Ark.	18	Mar. 19	(2)	20.2	Mar. 23
				20.3	Mar. 26
				21.9	Apr. 8
				23.4	Apr. 20
				21.5	May 3–5
				22.8	May 10
				21.9	12
				20.1	18
Parkin, Ark.	28	23	(2)	29.3	27–29
Madison, Ark.	32	29	(2)	32.0	29–30
Mississippi:					
New Madrid, Mo.	34	18	30	35.1	24–27
Red River Landing, La.	45	Mar. 15	May 31	56.4	Apr. 29–30
Baton Rouge, La.	35	Mar. 14	5	45.2	Apr. 18–19
				45.6	Apr. 27
				45.7	Apr. 29–30
		28	(2)	----------	----------
Atchafalaya Basin					
Atchafalaya:					
Melville, La.	37	Mar. 16	3	45.5	Apr. 20
				45.6	Apr. 22
				45.7	Apr. 25
					May 1
Atchafalaya, La.	25	Mar. 8	(2)	28.4	May 3–8
				27.7	May 19
Morgan City, La.	6	Apr. 6	16	8.8	Apr. 1
				7.2	Apr. 16–17
				8.0	Apr. 28
				7.7	May 2
				8.0	May 11–12
				8.3	May 16
				7.3	May 25
				6.8	11
				6.7	14
		24	26	6.2	24
		28	29	6.5	28
WEST GULF OF MEXICO DRAINAGE					
Sabine: Gladewater, Tex.	26	15	27	38.0	17–18
Elm Fork: Carrollton, Tex.	6	13	14	6.5	13
East Fork: Rockwall (nr.), Tex.	10	11	16	20.2	13
		18	19	11.0	19
Trinity:					
Dallas, Tex.	28	13	15	32.0	13–14
Rosser (nr.), Tex.	26	13	----------	31.8	16
Trinidad, Tex.	28	14	24	38.0	19
Long Lake, Tex.	40	18	26	42.2	19–20
Liberty, Tex.	24	26	July 3	25.3	July 2
PACIFIC SLOPE DRAINAGE					
San Joaquin Basin					
Kings: Piedra, Calif.	10	13	13	10.6	13
		14	14	10.6	14
		15	15	10.2	15
Columbia Basin					
Willamette: Portland, Oreg.	18	10	10	18.1	10
Columbia: Vancouver, Wash.	15	1	18	18.4	10–11

[1] Provisional.
[2] Continued into July.

CLIMATOLOGICAL DATA FOR JUNE 1945

CONDENSED CLIMATOLOGICAL SUMMARY OF TEMPERATURE AND PRECIPITATION BY SECTIONS

[For description of tables and charts, see Review, January 1943, p. 15]

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

Section	Temperature								Precipitation					
			Monthly extremes								Greatest monthly		Least monthly	
	Section average	Departure from the normal	Station	Highest	Date	Station	Lowest	Date	Section average	Departure from the normal	Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama	79.2	+0.9	3 stations	101	[1] 7	Valley Head	48	[1] 4	3.45	−0.80	Athens	7.29	Newton	0.40
Arizona	72.0	−3.2	Mohawk	118	21	2 stations	29	1	.04	−.31	3 stations	.34	103 stations	.00
Arkansas	75.2	−2.0	2 stations	98	[1] 10	Batesville Lives	43	3	9.26	+5.13	Calico Rock	16.42	Cummins Farm	3.45
California	67.3	−.6	Cow Creek	119	[1] 20	Ellery Lake	16	[1] 7	.36	+.03	Twin Lakes	3.44	62 stations	.00
Colorado	57.7	−3.9	Las Animas	101	27	Spicer	11	15	1.71	+.29	Ovid	5.50	Ignatio	.04
Florida	81.2	+1.3	Davenport	105	1	Pomano	59	24	7.84	+1.06	Mountain Lake	21.29	Pensacola	1.02
Georgia	78.7	+.5	Washington	105	29	Blairsville	41	5	3.25	−1.17	Donalsonville	7.77	Greensboro	.66
Idaho	56.6	−3.5	Bruneau	105	21	Deadwood Dam	19	13	2.28	+.89	Driggs	7.09	Burley	.48
Illinois	68.4	−3.8	Mount Vernon	97	28	Marengo	32	5	6.65	+2.68	White Hall	12.35	Marseilles	2.04
Indiana	68.9	−2.7	Scottsburg	97	28	2 stations	31	[1] 4	6.65	+2.74	Williams	11.11	Goshen	2.31
Iowa	64.1	−5.5	Boone	94	23	Decorah	29	4	4.70	+.01	Keokuk	9.26	Dumont	2.25
Kansas	68.0	−5.8	Syracuse	102	23	Tribune	37	1	4.72	+.69	Westmoreland	11.00	Leoti	1.46
Kentucky	71.6	−2.4	2 stations	98	[1] 29	Clermont	37	5	5.32	+1.16	Rumsey	10.53	Williamsburg	2.19
Louisiana	80.3	+.2	do	99	[1] 24	Plain Dealing	56	19	5.04	+.31	Cravens	12.69	Burrwood	.29
Maryland-Delaware	71.5	+.6	Cumberland, Md	102	30	Oakland, Md	29	6	4.50	+.54	La Plata, Md	7.95	Mount Savage Summit, Md.	1.59
Michigan	60.7	−3.7	Monroe	96	29	Watersmeet	23	5	3.80	+.65	Mount Pleasant	8.94	Alpena	1.41
Minnesota	59.5	−5.3	International Falls	94	22	Cloquet	24	4	4.46	+.35	Taylors Falls	9.85	Ada	1.48
Mississippi	78.9	−.1	6 stations	98	[1] 17	Booneville	47	5	4.87	+.69	Natchez	9.90	State College	1.56
Missouri	69.5	−4.1	3 stations	95	27	2 stations	37	4	8.84	+4.09	Greenville No. 2	17.10	Osceola	3.68
Montana	55.7	−4.0	Frazer	101	22	Northeast Entrance	19	14	2.80	+.22	Northeast Entrance	7.88	Heron	.50
Nebraska	62.4	−6.9	Niobrara	103	27	Bridgeport	31	16	4.68	+.99	York	8.59	Haigler	1.57
Nevada	62.1	−2.3	Overton	113	20	Ruby Lake	14	16	1.23	+.70	Lamoille	3.87	5 stations	.00
New England	63.6	−.5	Brockton, Mass	100	30	2 stations	25	2	5.08	+1.55	Cream Hill, Conn	10.05	Newport, Vt	1.50
New Jersey	69.9	+.9	3 stations	100	[1] 15	Layton	30	1	4.30	+.47	Long Branch	6.94	Tuckerton	1.42
New Mexico	66.4	−2.4	Carlsbad	109	26	Birmingham Ranch	14	4	.37	−.88	Yates	2.93	37 stations	.00
New York	64.3	−.8	Bedford Hills	100	15	Wiscoy	25	1	3.90	+.24	Spencer	9.11	Dannemora	.50
North Carolina	74.9	+.2	4 stations	105	[1] 29	Banner Elk	34	5	3.81	−.83	Wilmington	11.74	Highpoint	.22
North Dakota														
Ohio	67.5	−2.2	Ironton	98	30	2 stations	30	[1] 5	4.91	+1.01	Versailles	11.61	East Liverpool	2.12
Oklahoma	74.9	−2.3	Hollis	110	27	3 stations	40	[1] 1	6.95	+2.99	Tuskahoma	15.41	Mutual	.15
Oregon	57.9	−1.5	2 stations	102	[1] 18	Fremont	20	15	.57	−.72	Joseph	2.51	9 stations	.00
Pennsylvania	66.7	−1.5	Marcus Hook	103	30	Kane	27	6	4.07	−.06	Bradford	7.10	Gettysburg	1.56
South Carolina	78.6	+.9	Saluda	106	29	Caesars Head	41	5	3.94	−.78	Georgetown	13.98	Chester	.18
South Dakota	59.2	−7.0	Tyndall	96	27	Custer	29	[1] 16	4.07	+.57	De Smet	7.61	Raymond	1.80
Tennessee	73.3	−1.6	2 stations	100	[1] 29	Rugby	39	5	5.21	+1.04	Samberg	14.27	Red Springs	2.06
Texas	80.0	−.2	do	113	27	2 stations	44	1	3.50	+.51	Mount Pleasant	10.54	3 stations	.00
Utah	59.0	−5.4	Zion National Park	107	21	Soldier Summit	20	15	2.09	+1.41	Morris Canyon	6.73	St. George	T
Virginia	72.1	+.2	Danville	105	30	Monterey	28	6	3.51	−.65	Diamond Springs	7.80	Hopewell	.54
Washington	59.7	−1.3	Richland	102	20	2 stations	28	[1] 14	.77	−.80	Anatone	3.65	Chiwawa River	T
West Virginia	68.3	−1.5	Pineville	102	30	Pickens	22	6	3.82	−.63	Elkins	7.46	Clay	1.17
Wisconsin	60.4	−4.7	Sheboygan	95	24	2 stations	23	4	4.48	+.33	Solon Springs	8.83	Rib Falls	1.44
Wyoming	53.7	−4.8	Lovell	97	22	Centennial	18	16	3.72	+2.01	Bechler River	8.18	Kemmerer	1.14
Alaska (May)	41.2	−.4	Petersburg	78	27	Shishmaref	−21	1	1.29	−.33	Little Port Walter	9.35	Northway	.00
Hawaii	74.7	+1.4	Kaanapali	93	[1] 3	Haleakala Ranger Station.	39	30	3.68	−1.06	Kukui	24.00	15 stations	.00
Puerto Rico	78.2	+.7	Utuado	97	6	Guineo Reservoir	58	27	3.02	−3.00	San Sebastian	9.11	Dos Bocas	1.09

[1] Other dates also.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JUNE 1945

District and station	Elevation of instruments: Barometer above sea level	Thermometer above ground	Anemometer above ground	Pressure: Station	Sea level	Departure from normal	Temperature of the air: Mean	Departure from normal	Maximum	Date	Mean maximum	Minimum	Date	Mean minimum	Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Departure from normal	Greatest in 24 hours	Days with 0.01 inch or more	Wind: Average hourly velocity	Prevailing direction	Maximum velocity: Miles per hour	Direction	Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	°*F.*	°*F.*	°*F.*		°*F.*	°*F.*		°*F.*	°*F*		°*F.*	%	*In.*	*In.*	*In.*		*Mi.*								*0–10*	*In.*	*In.*	
NEW ENGLAND							63.8	+0.8										78	4.26	+1.2											6.6			
Eastport	75	67	85	1,010.2	1,013.2	−0.3	54.5	−.6	78	12	62	38	2	47	32	316	48	80	4.73	+1.8	1.10	13	9.2	s.	32	e.	27	3	11	16	7.1	.0	.0	4
Greenville, Maine	1,070	6	41	974.6	1,013.9	.....	59.4	+.2	90	30	70	31	3	48	38	210	52	...	2.76	−1.0	.78	15	...	nw.	...	...	...	2	12	16	.....	.0	.0	3
Portland, Maine [1]	103	5	43	1,009.5	1,013.5	−.7	60.9	−1.6	91	15	70	34	1	51	31	174	54	81	5.84	+2.6	1.82	16	8.4	s.	27	n.	27	4	11	15	6.8	.0	.0	8
Concord [1]	289	5	45	1,003.1	1,013.5	−1.1	64.8	+3.1	97	15	77	35	2	52	38	118	56	76	6.04	+2.8	1.70	15	7.4	nw.	34	nw.	15	1	14	15	7.1	.0	.0	8
Burlington [1]	403	5	51	998.6	1,013.5	−1.1	65.6	−.1	92	30	77	35	1	54	36	109	56	76	2.93	−.4	.95	12	7.6	s.	26	nw.	22	2	13	15	7.0	.0	.0	6
Boston [1]	124	33	62	1,008.8	1,013.5	−1.1	66.6	+.1	96	15	75	41	1	58	32	94	56	74	6.44	+3.6	2.66	17	10.7	ne.	37	n.	27	2	13	15	7.1	.0	.0	8
Nantucket	12	11	59	1,012.9	1,013.9	−1.3	62.0	+1.0	81	30	69	45	1	55	22	126	56	88	5.65	+3.0	4.60	10	11.7	sw.	55	ne.	27	5	11	14	6.4	.0	.0	0
Block Island	26	11	46	1,012.2	1,013.5	−1.1	64.0	+2.2	92	30	71	43	1	57	26	110	58	85	1.88	−.7	1.09	9	13.9	sw.	46	ne.	26	8	15	7	5.2	.0	.0	2
Providence [4]	159	46	60	1,007.8	1,014.2	−.7	68.7	+.4	98	15	78	39	1	59	31	81	56	75	3.97	+1.3	2.06	13	7.6	s.	29	n.	27	1	19	10	6.7	.0	.0	9
Hartford [1]	159	5	44	1,007.8	1,013.9	−1.0	67.8	+.7	94	15	79	40	7	57	32	95	58	74	4.53	+1.4	1.32	16	7.1	s.	26	n.	27	1	21	8	6.8	.0	.0	7
New Haven [1]	107	5	39	1,009.8	1,014.2	−.7	67.0	+3.7	94	30	76	42	6	58	27	92	58	76	2.11	−.7	.73	13	5.9	sw.	24	n.	26	5	18	7	6.3	.0	.0	5
MIDDLE ATLANTIC							71.6	+1.2										72	4.19	+0.6											6.0			
Albany [1]	97	26	40	1,009.8	1,014.2	−.7	65.6	−1.1	92	15	76	35	1	55	33	118	56	76	4.72	+1.6	1.42	19	7.0	s.	30	s.	21	2	11	17	7.2	.0	.8	8
Binghamton [3]	871	60	7	983.4	1,015.2	+.3	65.2	−.4	91	15	76	38	1	55	36	130	56	84	4.33	+.9	1.37	16	4.9	w.	23	w.	21	1	15	14	7.2	.0	.0	0
New York	314	415	454	1,002.4	1,013.9	−1.3	70.6	+1.8	95	30	78	45	1	63	24	76	57	66	4.42	+1.1	1.58	12	12.2	s.	41	nw.	21	8	14	8	5.8	.0	.0	9
Harrisburg [1]	374	30	49	1,001.0	1,014.6	−1.0	71.4	+1.1	97	14	82	43	6	60	31	61	60	70	3.95	+.4	1.16	11	6.4	w.	26	sw.	11	2	14	14	6.8	.0	.0	11
Philadelphia [1]	114	5	57	.....	.....	.....	71.5	+.9	97	30	82	44	1	61	30	65	62	73	3.77	+.5	.99	15	7.0	sw.	33	w.	18	2	17	11	6.5	.0	.0	10
Reading	323	47	306	1,002.7	1,014.6	.....	71.7	+1.4	97	30	82	45	1	62	29	65	...	...	5.02	+1.5	1.72	13	8.4	nw.	49	nw.	28	3	16	11	6.3	.0	.0	9
Scranton	805	72	104	985.8	1,014.9	−.3	66.6	−1.2	93	15	76	40	1	57	33	113	...	...	4.30	+.6	1.03	18	5.4	n.	25	sw.	28	4	17	9	6.0	T	.0	9
Atlantic City	52	37	172	1,012.5	1,014.6	−.6	69.8	+3.2	97	30	77	45	6	63	28	65	60	76	2.52	−.5	.67	13	13.6	s.	35	ne.	26	5	14	11	6.3	.0	.0	8
Trenton	190	89	107	1,007.1	1,014.2	.....	71.6	+2.1	98	30	81	46	1	62	27	71	60	69	3.37	+.3	1.39	15	7.8	s.	30	w.	18	2	16	12	6.3	.0	.0	10
Baltimore [2]	123	100	215	1,010.2	1,014.9	−.7	75.0	+2.3	100	30	84	49	6	66	28	28	62	68	2.65	−1.2	.77	9	8.9	sw.	38	sw.	18	9	15	6	5.0	.0	.0	8
Washington [2]	112	56	100	1,010.8	1,015.2	−.7	74.5	+2.3	99	30	85	46	6	64	29	30	62	68	5.13	+1.0	2.41	7	6.0	nw.	30	w.	18	6	17	7	5.6	.0	.0	8
Cape Henry	18	8	54	1,014.2	1,014.9	.....	75.2	+2.3	96	11	83	54	7	68	30	9	66	78	6.87	+2.9	3.96	10	11.0	s.	54	nw.	26	9	15	6	5.0	.0	.0	7
Lynchburg [1]	686	4	50	990.9	1,016.3	.0	72.8	−.3	100	30	84	40	6	62	32	48	61	70	2.72	−1.1	.63	10	6.9	sw.	32	sw.	14	11	13	6	5.1	.0	.0	8
Norfolk [2]	91	80	125	1,012.2	1,015.6	−.3	77.1	+2.7	100	30	86	54	6	68	32	12	66	74	7.72	+3.5	5.02	12	9.2	sw.	36	n.	26	9	13	8	5.6	.0	.0	6
Richmond	144	11	52	1,009.1	1,014.6	−1.7	75.6	+1.5	100	30	86	45	6	65	34	27	62	68	1.43	−2.5	.61	9	6.8	sw.	30	sw.	11	11	12	7	5.2	.0	.0	9
SOUTH ATLANTIC							78.1	+2.0										74	4.57	−0.1											5.2			
Asheville	2,253	77	92	938.7	1,016.3	.0	71.0	+2.3	94	29	83	42	5	59	35	32	59	75	5.04	+1.1	1.44	12	5.7	nw.	26	sw.	9	5	18	7	5.8	.0	.0	12
Charlotte [2]	779	63	86	988.2	1,015.9	−.4	78.2	+2.7	102	29	89	52	5	67	33	5	62	66	1.75	−2.5	,77	7	6.8	sw.	28	se.	30	6	15	9	5.8	.0	.0	7
Greensboro [1]	886	6	56	984.8	1,015.9	.....	74.8	+.8	100	30	86	49	6	63	32	30	62	70	1.52	−3.3	.49	8	6.7	sw.	34	w.	12	7	16	7	5.5	.0	.0	4
Hatteras	11	5	50	1,015.2	1,015.6	−.7	75.9	+.3	87	26	81	59	6	70	18	2	70	85	3.96	−.6	1.37	9	12.8	sw.	52	nw.	26	9	11	10	5.3	.0	.0	5
Raleigh [1]	376	5	69	1,002.4	1,016.3	.0	77.2	+1.5	100	30	88	47	6	66	31	17	64	72	1.13	−3.3	.52	6	7.0	sw.	32	sw.	18	9	14	7	5.2	.0	.0	7
Wilmington	72	73	107	1,013.5	1,015.9	−.4	77.8	+1.0	94	2	86	54	6	70	25	1	70	82	11.74	+6.6	7.69	10	9.7	sw.	37	n.	25	11	11	8	5.4	.0	.0	8
Charleston [3]	48	11	92	1,013.9	1,015.9	−.4	80.2	+1.3	95	2	87	64	5	74	21	0	70	80	7.12	+2.5	6.01	8	10.2	s.	42	nw.	25	14	12	4	4.3	.0	.0	7
Columbia, S. C. [3]	347	70	91	1,003.4	1,015.9	−.4	80.4	+2.3	103	28	91	56	5	70	28	0	67	70	3.06	−1.1	1.58	11	7.3	s.	23	w.	2	10	15	5	4.7	.0	.0	9
Greenville, S. C. [1]	1,040	18	36	979.3	1,015.6	.....	76.8	+2.7	100	29	88	51	5	66	29	4	62	66	2.59	−2.0	.85	8	7.5	sw.	33	sw.	12	6	14	10	5.9	.0	.0	8
Augusta [2]	182	62	77	1,009.1	1,015.6	−.7	81.4	+2.7	101	1	92	60	5	70	29	0	65	65	3.59	−1.1	.91	7	5.3	s.	26	sw.	17	11	12	7	5.0	.0	.0	11
Savannah [4]	65	73	152	1,013.9	1,016.3	.0	81.8	+3.6	102	1	93	62	6	71	29	0	70	78	5.35	+.1	2.80	7	10.3	s.	30	s.	7	11	16	3	4.6	.0	.0	6
Jacksonville [2]	43	86	110	1,015.2	1,016.9	+.6	82.1	+2.2	99	1	91	68	18	73	23	0	70	74	8.00	+2.7	4.69	8	8.4	s.	43	nw.	26	9	15	6	5.1	.0	.0	7
FLORIDA PENINSULA							81.9	+1.2										78	8.01	+1.8											5.0			
Key West [2]	21	10	64	1,015.6	1,016.3	+.7	83.2	+1.3	90	6	88	73	21	79	13	0	74	76	3.47	−.8	2.44	4	10.4	e.	27	nw.	24	18	6	6	4.2	.0	.0	2
Miami [2]	25	242	249	1,015.9	1,016.9	+1.0	79.8	−.2	89	25	84	69	5	76	15	0	72	78	2.05	−5.1	1.10	11	13.1	se.	43	se.	23	11	13	6	5.1	.0	.0	7
Tampa [1]	35	6	43	1,052.2	1,016.6	+.3	82.6	+2.4	96	1	91	71	29	75	23	0	72	80	18.52	+11.3	10.41	10	9.4	w.	49	sw.	24	8	13	9	5.8	.0	.0	14
EAST GULF							79.8	+1.1										76	4.24	−0.5											5.6			
Atlanta [1]	1,173	33	72	975.3	1,015.9	−.4	78.0	+1.3	98	29	89	51	5	67	30	0	64	68	3.15	−.8	1.96	10	8.5	nw.	42	w.	17	10	9	11	5.5	.0	.0	10
Macon [2]	370	79	87	1,002.4	1,015.6	−.7	80.1	+1.2	101	29	92	57	5	69	31	0	66	69	3.52	−.5	1.33	12	5.9	s.	33	nw.	6	7	12	11	6.0	.0	.0	11
Thomasville	273	49	58	1,006.8	1,016.9	+1.0	80.6	+1.1	97	1	91	65	5	70	27	0	...	...	3.39	−2.1	.89	13	...	...	...	...	...	...	1	16	13	.....	.0	.0	12
Apalachicola	35	11	51	1,014.6	1,015.9	.....	81.0	+1.2	90	4	88	69	29	74	21	0	72	78	2.54	−3.1	.80	7	8.3	sw.	40	se	29	4	20	6	5.4	.0	.0	8
Pensacola	56	54	79	1,013.9	1,015.9	+.3	81.5	+2.2	94	24	88	67	4	75	24	0	72	76	1.02	−3.7	.58	6	7.3	s.	30	se.	29	7	21	2	4.9	.0	.0	9
Anniston	741	9	...	.....	.....	.....	76.4	−.2	96	29	88	49	5	65	32	0	...	...	6.15	+2.0	2.50	9	...	sw.	...	...	...	14	9	7	.....	.0	.0	8
Birmingham [1]	700	5	62	990.9	1,015.6	.0	77.8	+1.0	98	29	90	51	5	66	33	0	66	70	1.06	.....	.34	9	7.3	sw.	47	se.	30	8	13	9	5.5	.0	.0	10
Mobile [2]	57	86	161	1,013.5	1,015.6	.0	81.6	+1.3	94	24	90	65	4	74	24	0	71	80	3.76	−1.7	2.07	9	6.8	s.	22	e.	30	4	21	5	5.6	.0	.0	10
Montgomery [2]	218	92	105	1,007.8	1,015.6	−.3	81.0	+1.4	98	27	91	62	5	71	26	0	68	74	3.83	.0	1.60	8	6.4	sw.	37	n.	6	12	9	9	5.3	.0	.0	8
Meridian [2]	375	67	92	1,002.0	1,015.2	.0	79.3	+1.2	95	30	90	61	5	69	26	0	68	76	5.40	+.8	2.33	10	6.2	s.	24	sw.	10	11	16	3	5.0	.0	.0	7
Vicksburg [2]	247	82	102	1,005.8	1,014.2	−.7	78.8	−.2	93	30	87	63	2	70	23	0	70	84	9.79	+5.8	3.44	10	8.1	s.	30	s.	13	2	17	11	6.4	.0	.0	11
New Orleans [4]	53	50	84	1,012.9	1,014.6	−.6	81.8	+2.2	96	25	91	67	2	73	25	0	72	80	4.13	−1.8	.97	13	6.2	se.	19	se.	13	4	20	6	5.9	.0	.0	10
WEST COAST							80.6	+0.5										77	6.08	+2.4											6.2			
Shreveport [1]	249	5	64	1,004.1	1,012.9	−1.7	80.6	+.2	96	7	90	61	19	72	26	0	70	76	3.55	.0	1.85	8	10.0	s.	39	ne.	2	4	14	12	6.3	.0	.0	8
Fort Smith	463	57	82	995.6	1,011.5	−2.4	76.0	−1.5	93	27	84	57	18	68	29	1	67	77	15.02	+11.3	8.58	14	8.3	e.	40	sw.	7	4	12	14	6.6	.0	.0	14
Little Rock [1]	357	26	58	1,001.0	1,013.5	−1.1	76.7	−.7	93	27	86	56	4	68	26	3	66	74	7.79	+4.0	2.23	14	9.0	s.	32	se.	13	2	16	12	6.8	.0	.0	13
Austin [1]	605	10	41	990.2	1,011.2	.....	81.4	+.2	97	2	91	64	19	72	30	0	70	72	5.69	+3.2	2.14	7	10.9	s.	34	n.	3	5	18	7	5.5	.0	.0	8
Brownsville [1]	57	5	54	1,008.1	1,010.2	.....	84.0	+1.6	94	25	92	72	23	76	21	0	75	82	1.08	−2.1	.91	5	13.7	se	30	s.	11	2	16	12	6.3	.0	.0	4
Corpus Christi [1]	20	4	33	1,010.5	1,011.2	−1.7	82.4	+2.9	93	29	89	66	12	76	18	0	74	83	2.58	.....	2.16	5	14.4	se.	37	s.	10	8	15	7	5.5	.0	.0	4
Dallas [1]	512	5	45	992.9	1,010.8	.....	80.4	.0	99	26	90	58	18	71	27	0	68	71	4.54	+.6	3.72	5	13.7	s.	35	sw.	10	6	15	9	5.9	.0	.0	5
Fort Worth [1]	679	40	56	987.1	1,010.8	−2.4	79.6	−.3	97	26	89	60	18	70	26	0	67	70	4.12	+.8	2.06	6	13.4	s.	46	sw.	10	8	11	11	5.7	.0	.0	10
Galveston [2]	54	106	114	1,011.2	1,012.9	−1.3	81.2	+.5	89	25	85	66	13	77	14	0	75	84	9.01	+4.6	6.41	7	12.9	s.	35	s.	13	2	23	5	6.1	.0	.0	7
Houston [3]	138	157	190	1,007.5	1,012.2	.....	81.6	+.2	96	25	89	66	12	74	25	0	72	82	5.38	+.8	3.42	8	11.3	se.	38	se.	3	1	12	17	7.4	.0	.0	7
Palestine	510	64	72	994.9	1,012.2	−1.7	79.6	+.6	95	26	88	61	2	71	29	0	68	72	4.09	+.5	1.43	8	8.4	s.	24	se.	12	5	19	6	5.8	.0	.0	6
Port Arthur [3]	34	59	134	1,011.9	1,013.2	.....	81.9	+.9	92	30	88	65	13	76	21	0	73	82	7.36	+2.6	4.66	7	14.4	s.	38	e.	12	4	19	7	5.9	.0	.0	10
San Antonio [1]	693	8	51	986.8	1,010.5	−2.0	82.4	+1.4	98	8	92	64	13	72	27	0	70	72	5.31	+2.8	3.95	4	10.4	se.	42	nw.	12	3	14	13	7.0	.0	.0	6
OHIO VALLEY AND TENNESSEE							71.0	−1.0										76	5.45	+1.5											6.5			
Chattanooga [1]	762	6	66	988.5	1,015.6	−.3	75.2	+2.0	98	29	87	49	5	64	31	7	65	76	3.18	−1.0	1.31	12	6.4	s.	31	se.	14	9	11	10	5.6	.0	.0	14
Knoxville [1]	995	27	53	980.7	1,015.9	−.3	74.2	+.4	98	29	85	48	5	64	29	22	62	71	4.34	+.2	1.97	8	7.4	sw.	45	sw.	14	11	12	7	5.0	.0	.0	7
Memphis [4]	399	5	86	1,000.0	1,013.9	−1.0	76.6	+.2	95	27	86	52	4	67	27	3	66	72	5.89	+2.3	1.71	10	8.0	sw.	30	nw.	5	7	13	10	5.8	.0	.0	11
Nashville [1]	546	5	72	995.6	1,015.2	−.4	74.6	−1.0	96	29	85	48	5	65	28	21	62	71	2.73	−1.3	1.59	12	7.8	s.	34	sw.	10	6	13	11	6.2	.0	.0	9

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JUNE 1945—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Precipitation: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
OHIO VALLEY AND TENNESSEE—Con.																																	
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	° *F.*	° *F.*	° *F*		° *F.*	° *F.*		° *F.*	° *F*		° *F.*	%	*In.*	*In.*	*In.*			*Mi.*							*0–10*	*In.*	*In.*	
Lexington	989	4	28	980.0	1,015.9	0.0	69.8	−2.4	93	29	80	42	5	60	26	60	62	78	7.03	+3.0	1.47	14	---	s.	---	---	---	4	13	13	6.7	.0	.0	11
Louisville [2]	525	106	120	995.9	1,015.2	.0	72.0	−2.7	94	28	80	48	4	64	24	39	62	77	5.80	+2.0	1.41	15	8.7	sw.	37	s.	14	5	9	16	6.8	.0	.0	11
Evansville [1]	431	11	40	999.0	1,014.6	− .	71.0	−.9	92	28	80	48	4	62	25	36	62	78	6.85	+2.8	1.97	14	7.9	s.	29	n.	7	3	8	19	7.4	.0	.0	12
Indianapolis [1]	823	5	54	984.8	1,014.6	− .	68.1	−1.8	91	29	78	40	5	58	27	55	59	77	8.12	----	1.50	16	9.2	sw.	52	sw.	16	3	8	19	7.3	.0	.0	14
Terre Haute [2]	575	68	149	993.9	1,014.6	----	70.4	−2.4	92	28	79	43	4	62	25	48	61	79	8.70	+4.8	1.57	19	8.8	s.	47	w.	16	3	8	19	7.2	.0	.0	16
Cincinnati [3]	627	11	51	992.6	1,015.2	−.4	70.2	−1.0	94	29	80	45	5	60	28	52	61	78	7.26	+3.6	2.52	13	6.0	sw.	32	sw.	30	5	10	15	6.9	.0	.0	8
Columbus [2]	822	90	110	985.8	1,014.9	−.7	69.9	−1.0	94	29	80	43	4	60	34	56	59	72	3.24	−.1	.82	13	8.4	s.	36	s.	14	4	10	16	6.9	.0	.0	10
Dayton [1]	1,003	6	55	979.3	1,015.2	----	68.6	−2.3	93	29	78	42	4	59	32	63	58	74	6.78	+3.0	1.57	13	9.9	sw.	54	sw.	16	3	11	16	6.9	.0	.0	12
Elkins [1]	1,947	4	45	948.2	1,016.6	+.7	65.4	−.2	90	30	77	31	6	54	36	95	59	86	7.46	+2.4	2.02	16	5.4	nw.	30	nw.	2	4	10	16	6.9	.0	.0	12
Parkersburg	637	77	84	992.2	1,015.2	−.7	70.2	−1.2	95	29	81	38	6	60	34	66	60	74	3.38	−.6	1.32	12	5.6	se.	26	nw.	30	7	13	10	6.2	.0	.0	11
Pittsburgh [1]	842	39	54	984.8	1,015.2	−.4	68.5	−.1	92	29	78	38	5	59	27	81	56	70	3.65	−.2	1.09	12	8.6	sw.	38	sw.	16	6	12	12	6.3	.0	.0	9
LOWER LAKES							65.0	−0.9										75	3.72	+0.4										6.6			
Buffalo [1]	768	34	96	986.8	1,014.6	−.3	64.0	−.9	93	30	73	35	1	55	32	145	56	76	2.55	−.3	.75	12	10.9	sw.	42	sw.	29	6	9	15	6.5	.0	.0	8
Canton	448	10	61	997.0	1,013.2	----	64.0	+.5	88	29	74	31	1	54	33	119	54	72	2.81	−.5	.87	12	6.8	w.	24	w.	11	7	11	12	6.4	.0	.0	7
Oswego	335	71	85	1,002.0	1,014.6	−.3	62.2	−.7	88	29	70	40	1	54	25	157	54	75	2.13	−1.1	.43	14	6.6	w.	18	se.	10	7	9	14	6.2	.0	.0	9
Rochester [1]	523	5	69	995.6	1,014.9	.0	64.6	−.5	90	14	74	35	1	55	32	140	54	72	2.40	−.6	.69	13	7.8	w.	33	w.	11	6	6	18	6.9	.0	.0	7
Syracuse [1]	596	5	57	992.9	1,014.9	.0	64.8	+.3	90	25	75	34	1	55	32	129	56	76	3.52	−.4	.88	15	7.5	sw.	40	w.	21	4	7	19	7.3	.0	.0	7
Erie [2]	714	57	81	989.5	1,015.2	.0	64.8	−1.4	88	14	72	42	1	58	24	191	58	82	4.85	+1.5	1.96	14	6.3	w.	22	sw.	29	7	11	12	6.6	.0	.0	12
Cleveland [1]	762	27	54	987.5	1,015.2	.0	66.6	−1.1	93	29	78	38	6	56	31	56	56	74	4.41	+1.3	1.31	16	8.4	s.	28	nw.	28	4	10	16	6.7	.0	.0	12
Sandusky	629	5	67	991.9	1,015.2	.0	67.0	−1.8	94	29	76	43	6	58	29	90	---	---	5.72	+2.2	1.44	17	7.4	sw.	28	sw.	15	4	12	14	6.6	.0	.0	12
Toledo [1]	628	5	47	991.9	1,014.9	.0	65.6	−1.6	95	29	76	38	5	55	31	101	57	7	4.36	+1.0	.83	16	9.2	sw.	31	sw.	10	4	22	4	5.7	.0	.0	9
Fort Wayne [1]	857	5	33	983.4	1,014.6	----	65.6	−1.8	88	28	76	39	4	56	29	84	58	77	3.74	+.2	1.00	16	7.1	sw.	31	nw.	1	5	7	18	7.2	.0	.0	9
Detroit [1]	730	5	78	988.8	1,015.2	+.3	65.3	−.9	92	29	75	38	5	56	29	116	54	70	4.47	+.9	1.44	13	7.6	s.	31	n.	28	3	10	17	7.0	.0	.0	5
UPPER LAKES							60.3	−2.1										73	3.25	−2.0										6.5			
Alpena	609	5	89	992.2	1,014.9	+.3	59.4	−1.0	91	24	68	38	4	50	35	214	50	72	1.41	−1.9	.43	12	9.3	se.	31	ne.	2	7	13	10	6.0	.0	.0	7
Escanaba	612	51	72	992.2	1,014.2	+.3	58.3	−2.4	84	24	67	34	3	50	27	216	48	72	3.02	−.2	.86	12	10.3	s.	31	ne.	2	9	11	10	5.7	T	.0	6
Grand Rapids [2]	707	70	244	988.8	1,014.2	−.7	64.8	−3.0	88	28	74	35	4	55	26	105	54	74	3.86	+.4	1.11	11	9.6	sw.	51	s.	28	7	9	14	6.3	.0	.0	8
Lansing [2]	878	5	90	983.1	1,014.6	----	62.6	−3.8	88	29	72	37	4	53	29	145	54	71	3.70	+.2	1.42	14	6.7	s.	21	nw.	2	6	7	17	6.7	.0	.0	7
Marquette	734	44	73	987.1	1,014.6	+.7	58.0	−.9	94	22	67	34	2	49	32	265	48	70	2.43	−.8	1.08	13	7.4	n.	24	s.	19	6	11	13	6.5	T	.0	3
Sault Ste. Marie [1]	614	11	52	991.9	1,014.9	+.3	57.2	−.3	88	23	70	34	1	45	37	254	48	76	1.65	−1.1	.44	11	9.6	nw.	34	sw.	14	3	17	10	6.7	T	.0	7
Chicago [1]	673	5	36	989.5	1,013.5	−1.1	65.4	−2.7	93	27	75	35	4	55	32	102	55	72	4.12	+.6	1.76	11	8.1	s.	34	nw.	29	4	8	18	7.1	.0	.0	8
Green Bay	617	90	123	991.5	1,014.2	.0	61.8	−3.1	86	23	71	35	4	53	27	160	51	70	4.92	+1.2	1.74	12	9.2	s.	29	ne.	1	2	11	17	6.9	.0	.0	5
Milwaukee [1]	681	33	66	989.5	1,013.9	−.3	60.6	−1.5	87	24	70	33	4	52	28	194	52	75	2.81	−.6	.99	10	10.5	n.	42	s.	28	6	10	14	6.5	.0	.0	5
Duluth [2]	1,133	5	47	972.6	1,013.9	+.7	55.3	−1.9	86	23	64	31	4	47	28	315	46	74	4.55	+.6	1.19	16	11.2	no.	43	ne.	1	9	7	14	6.2	T	.0	7
NORTH DAKOTA							58.4	−4.6										70	1.91	−1.7										6.7			
Fargo [1]	940	5	43	978.0	1,012.2	−.3	60.3	−4.1	92	22	71	35	3	49	38	187	49	70	.76	−3.3	.38	9	11.3	s.	30	se.	26	6	12	12	6.3	.0	.0	3
Bismarck [1]	1,677	5	43	952.6	1,012.2	+.7	58.0	−4.9	95	22	69	37	14	47	38	249	46	70	1.74	−1.6	.54	12	11.3	se.	36	w.	26	4	10	16	6.9	.0	.0	8
Devils Lake	1,478	11	44	959.0	1,012.2	+.3	57.6	−4.3	92	21	68	35	2	47	34	252	47	72	2.54	−1.0	1.41	14	7.7	s.	26	ne.	1	5	11	14	6.5	.0	.0	6
Grand Forks [1]	832	4	41	981.0	1,011.5	----	58.6	----	93	22	71	32	3	46	36	228	48	---	3.71	----	1.60	16	---	s.	---	---	---	7	9	14	---	.0	.0	3
Williston	1,878	42	50	945.1	1,011.5	+.3	57.6	−5.1	99	22	67	40	2	48	35	263	44	68	2.61	−.8	.83	17	7.8	w.	42	w.	23	3	10	17	7.2	.0	.0	8
UPPER MISSISSIPPI							66.0	−4.3										75	5.36	+1.2										6.9			
Minneapolis - St. Paul [1]	919	43	74	979.3	1,012.9	−.3	61.4	−6.1	89	23	70	34	3	52	31	138	51	72	5.57	+1.4	1.20	17	10.3	e.	41	e.	1	8	10	12	5.8	.0	.0	8
Springfield, Minn.	1,025	4	42	976.3	1,013.2	----	62.0	----	91	22	72	34	3	52	34	151	51	70	4.60	----	1.41	14	---	sw.	---	---	---	9	6	15	---	.0	.0	6
La Crosse [1]	714	5	29	987.1	1,012.9	−.6	61.8	−5.2	88	23	72	32	4	52	31	150	52	74	3.67	−.4	1.27	14	7.8	s.	34	se.	28	8	7	15	6.3	.0	.0	5
Madison [2]	974	70	78	1,012.9	1,014.2	+.3	62.6	−4.6	86	23	71	38	3	54	26	141	54	76	3.27	−.5	.99	14	6.7	sw.	25	sw.	24	5	9	16	6.9	.0	.0	5
Charles City	1,015	10	51	977.3	1,013.9	+1.0	62.4	−4.1	88	23	72	35	4	53	29	135	---	---	3.65	−1.0	.88	13	5.9	se.	22	nw.	28	9	9	12	6.0	.0	.0	9
Moline [1]	606	6	50	991.5	1,013.9	.0	66.5	−2.8	91	24	76	39	4	57	31	81	56	72	2.52	−1.6	.94	12	9.2	s.	29	sw.	27	3	8	19	7.3	.0	.0	11
Des Moines [2]	860	5	99	982.4	1,013.2	.0	65.2	−5.4	87	23	73	41	4	57	25	87	55	75	2.55	−2.2	.83	12	9.1	n.	35	sw.	27	5	10	15	6.8	.0	.0	13
Dubuque	699	60	79	988.2	1,013.5	.0	64.8	−4.6	89	23	74	38	4	56	27	101	55	73	6.38	+2.1	2.24	14	5.2	s.	16	se.	9	4	8	18	7.3	.0	.0	8
Burlington [1]	702	4	36	988.2	1,013.5	−.4	66.7	−4.8	92	28	76	40	4	57	30	83	58	76	6.11	+1.4	2.81	13	8.7	s.	31	w.	15	3	5	22	7.8	.0	.0	12
Cairo	357	5	99	1,001.4	1,014.2	−.7	74.1	−3.2	93	28	83	52	4	65	24	19	---	---	10.17	+6.3	2.06	16	8.9	sw.	33	sw.	1	5	12	13	6.5	.0	.0	16
Peoria [1]	609	6	26	991.9	1,013.9	−.3	66.4	−3.5	90	28	75	39	4	58	29	77	60	79	5.66	+1.9	2.07	16	8.3	s.	38	w.	15	3	7	20	7.7	.0	.0	16
Springfield, Ill. [2]	636	5	191	991.2	1,013.9	−.3	69.5	−2.7	92	28	78	46	4	61	24	62	60	82	7.34	+3.3	1.39	19	10.2	s.	42	se.	7	3	6	21	7.6	.0	.0	16
St. Louis [2]	568	35	303	993.6	1,013.5	−.7	70.6	−4.4	91	28	78	48	4	63	---	42	---	76	7.42	+3.6	1.72	17	10.9	sw.	40	sw.	1	2	9	19	---	.0	.0	12
MISSOURI VALLEY							65.8	−5.2										76	6.36	+2.0										6.6			
Columbia, Mo. [2]	784	6	66	985.1	1,013.2	−1.0	69.1	−4.3	92	28	77	43	4	61	26	50	60	80	9.50	+4.7	3.21	19	5.8	s.	26	nw.	30	3	13	14	7.0	.0	.0	17
Kansas City [1]	963	39	76	977.7	1,011.9	−1.3	68.9	−4.7	92	27	77	44	4	61	26	52	58	72	6.05	+1.4	1.50	15	9.6	ne.	56	nw.	30	2	12	16	7.4	.0	.0	14
St. Joseph [2]	967	11	49	977.7	1,011.9	----	67.2	−6.5	91	27	76	43	4	59	25	69	59	76	10.10	+5.2	3.26	14	8.1	e.	31	nw.	15	1	21	26	4.5	.0	.0	12
Springfield, Mo. [1]	1,324	5	67	966.5	1,012.9	−1.3	68.8	−2.9	90	28	78	49	18	60	28	43	62	83	7.25	+2.6	2.18	17	9.3	se.	39	se.	5	1	12	17	7.5	.0	.0	15
Topeka	987	65	87	977.0	1,011.9	----	68.9	−4.5	93	27	78	44	4	60	29	50	60	75	5.32	+.7	1.97	16	8.5	s.	35	nw.	30	3	12	15	7.0	.0	.0	12
Lincoln [1]	1,189	11	81	970.2	1,011.9	−.6	65.8	−5.6	93	27	75	42	3	57	27	96	56	76	7.03	+2.7	2.25	14	8.9	n.	32	ne.	15	5	14	11	6.6	.0	.0	12
Omaha [1]	1,105	5	68	973.2	1,012.5	−.4	66.0	−4.7	90	27	75	39	4	57	29	89	55	72	4.18	−.4	1.70	11	10.6	n.	45	e.	15	5	12	13	6.6	.0	.0	9
Valentine	2,598	46	54	922.1	1,012.9	+1.7	59.5	−7.4	89	27	70	38	16	49	33	212	48	72	3.70	+.8	.65	15	9.0	n.	29	w.	27	4	13	13	6.8	.0	.0	8
Sioux City [1]	1,138	5	40	972.2	1,012.5	.0	63.6	−5.2	91	27	73	38	4	54	30	126	54	76	6.50	+2.5	2.64	14	9.5	e.	57	w.	27	7	11	12	6.5	.0	.0	9
Huron [1]	1,301	5	41	966.5	1,013.2	+1.7	60.2	−6.0	90	23	70	39	4	51	30	187	52	76	4.02	+.2	1.24	15	11.3	s.	34	nw.	1	5	13	12	6.5	.0	.0	9
NORTHERN SLOPE							57.2	−4.6										68	2.94	+0.7										7.5			
Billings [1]	3,570	16	40	889.3	1,011.9	----	58.1	−6.8	92	21	68	39	14	48	33	242	48	74	2.21	----	.65	15	11.5	sw.	47	nw.	22	1	9	20	7.7	.0	.0	8
Havre	2,507	11	67	924.5	1,012.5	+1.7	59.1	−2.9	94	21	70	40	12	49	34	214	44	64	2.12	−.7	.71	15	10.1	sw.	34	w.	22	1	9	20	7.8	.0	.0	6
Helena [1]	4,124	5	43	872.7	1,013.5	+1.6	56.1	−3.1	92	21	66	35	15	46	41	285	42	66	2.79	+.8	.93	18	9.7	sw.	40	w.	26	0	8	22	8.2	.0	.0	5
Missoula [1]	3,263	4	32	901.5	1,014.6	----	56.5	−3.1	96	21	69	31	15	44	45	269	40	63	.73	−1.3	.18	13	7.6	nw.	34	s.	21	0	10	20	7.8	.0	.0	4
Kalispell	2,973	48	56	909.6	1,012.2	.0	56.8	−.9	88	21	67	38	14	46	35	257	42	66	2.82	+.8	.87	16	5.7	w.	32	w.	21	1	10	19	7.9	T	.0	7
Miles City [1]	2,371	5	78	928.5	1,012.2	+1.4	58.5	----	97	22	69	38	15	48	37	237	46	68	2.01	----	.65	12	---	se.	---	---	---	1	8	21	8.1	.0	.0	4
Rapid City [1]	3,259	5	63	900.1	1,013.2	+2.4	55.6	−8.6	89	22	65	38	16	46	36	300	48	78	4.26	+1.2	.67	21	12.7	nw.	47	nw.	12	2	13	15	7.2	.0	.0	11
Cheyenne [1]	6,094	5	40	812.1	1,011.2	+.7	55.2	−5.2	83	21	68	29	16	42	40	299	43	71	3.47	+1.9	1.02	14	10.6	nw.	45	nw.	27	4	12	14	6.5	T	.0	16
Lander	5,352	60	68	833.7	1,011.2	+.4	55.4	−5.1	89	21	69	33	15	42	41	303	38	58	1.92	+.8	.67	10	5.0	sw.	25	w.	27	3	18	9	6.4	1.0	.0	8
Sheridan [1]	3,790	5	38	882.8	1,012.5	----	56.8	−4.7	88	21	67	37	16	46	40	266	45	71	4.26	+2.2	.93	21	8.8	nw.	42	nw.	17	1	11	18	8.1	.0	.0	9
North Platte [2]	2,821	11	51	914.3	1,011.9	+.7	66.2	−5.3	90	27	72	42	16	52	35	149	50	73	4.10	+.9	1.49	16	7.7	s.	30	nw.	27	6	9	15	6.7	.0	.0	13

See footnotes at end of table.

CLIMATOLOGICAL DATA FOR WEATHER BUREAU STATIONS FOR JUNE 1945—Continued

District and station	Elevation of instruments: Barometer above sea level	Elevation of instruments: Thermometer above ground	Elevation of instruments: Anemometer above ground	Pressure: Station	Pressure: Sea level	Pressure: Departure from normal	Temperature of the air: Mean	Temperature of the air: Departure from normal	Temperature of the air: Maximum	Temperature of the air: Date	Temperature of the air: Mean maximum	Temperature of the air: Minimum	Temperature of the air: Date	Temperature of the air: Mean minimum	Temperature of the air: Greatest daily range	Total degree days	Mean temperature of the dew point	Mean relative humidity	Precipitation: Total	Precipitation: Departure from normal	Precipitation: Greatest in 24 hours	Precipitation: Days with 0.01 inch or more	Precipitation: Average hourly velocity	Wind: Prevailing direction	Wind: Maximum velocity: Miles per hour	Wind: Maximum velocity: Direction	Wind: Maximum velocity: Date	Clear days	Partly cloudy days	Cloudy days	Average cloudiness, tenths	Total snowfall	Snow, sleet, and ice on ground at end of month	Number of days with thunderstorms
	Ft.	*Ft.*	*Ft.*	*Mbs.*	*Mbs.*	*Mbs.*	° *F.*	° *F.*	° *F*		° *F.*	° *F.*		° *F.*	° *F*		° *F.*	%	*In.*	*In.*	*In.*				*Mi.*							*0–10*	*In.*	*In.*	
							68.4	−4.1										71	4.45	+1.2													6.3			
MIDDLE SLOPE																																		
Denver [2]	5,292	106	113	836.4	1,010.5	0.0	62.0	−4.3	90	13	73	40	16	51	37	142	43	63	1.75	+.4	.55	11	8.0	s.	30	ne.	13	5	11	14	6.3	.0	.0	13
Pueblo [1]	4,690	5	36	854.4	1,009.5	−.7	64.8	−3.8	93	27	79	40	17	50	44	72	44	58	1.54	+.2	.86	9	8.8	se.	34	n.	13	10	11	9	5.2	.0	.0	8
Concordia	1,392	50	58	963.1	1,012.2	−.3	66.4	−6.6	95	27	76	44	4	57	28	79	56	74	4.38	.0	2.01	15	7.6	e.	51	w.	30	4	11	15	6.7	.0	.0	13
Dodge City [1]	2,509	5	58	924.5	1,010.5	−1.0	66.6	−5.9	96	27	78	46	1	55	36	62	55	72	3.19	−.1	.96	14	14.0	n.	42	e.	27	4	11	15	6.4	.0	.0	11
Wichita [1]	1,358	6	64	963.4	1,010.8	−2.1	70.4	−4.0	92	27	80	51	4	61	35	25	60	74	4.00	−.4	.96	12	13.0	s.	34	s.	27	8	11	11	6.0	.0	.0	13
Oklahoma City [1]	1,214	10	47	967.8	1,010.2	−2.7	74.7	−1.3	95	30	83	55	4	64	28	1	65	78	10.05	+6.4	4.81	14	9.3	s.	26	n.	10	6	13	11	5.8	.0	.0	14
Tulsa [1]	674	10	60	987.5	1,010.8	-----	73.8	−2.7	93	7	83	53	19	65	30	4	65	77	6.25	+1.8	2.79	14	11.5	s.	40	ne.	11	2	10	18	7.4	.0	.0	18
																																4.4		
							78.2	+1.0										54	1.64	−0.9															
SOUTHERN SLOPE																																		
Abilene [1]	1,738	4	59	949.5	1,008.5	−3.4	79.2	+1.6	102	27	91	53	19	67	37	1	64	68	4.24	+1.2	2.48	10	16.6	s.	51	s.	9	15	7	8	4.3	.0	.0	10
Amarillo [1]	3,676	5	42	886.6	1,008.8	−2.0	72.6	+1.2	102	27	87	50	16	58	44	13	50	57	1.61	−1.2	.94	7	15.2	se.	38	se.	3	10	16	4	4.5	.0	.0	8
Del Rio	960	63	71	975.6	1,007.8	−3.0	84.8	+1.4	105	14	96	62	11	74	39	0	67	61	.40	−2.2	.33	3	11.5	se.	31	nw.	11	7	17	6	5.3	.0	.0	7
Roswell	3,566	75	85	888.9	1,007.1	−2.0	76.2	−.1	102	26	92	53	3	60	42	0	36	30	.33	−1.3	.32	2	9.3	s.	27	nw.	11	18	9	3	3.5	.0	.0	3
																																2.1		
							75.6	−1.3										28	0.02	−0.3															
SOUTHERN PLATEAU																																		
El Paso [1]	3,778	39	85	882.8	1,005.8	−1.7	79.0	+1.0	102	26	92	50	12	66	40	0	43	29	.03	−.6	.03	1	12.8	sw.	40	nw.	11	23	6	1	2.5	.0	.0	1
Albuquerque [1]	5,314	5	45	835.4	1,005.8	-----	72.6	.0	95	30	88	46	1	58	42	11	29	24	T	−.5	T	0	10.7	w.	39	s.	25	17	11	2	3.5	.0	.0	2
Flagstaff	6,907	36	51	790.4	1,011.9	+3.4	58.2	−1.3	90	30	77	29	11	40	49	208	23	32	.06	−.4	.06	1	----	sw.	----	----	----	23	5	2	2.5	.0	.0	1
Phoenix [2]	1,107	39	87	-----	1,006.4	−.7	82.4	−2.1	109	20	99	58	1	66	----	0	40	28	.00	−.0	.00	0	7.0	w.	21	w.	5	26	4	0	----	.0	.0	0
Tucson [1]	2,555	5	39	921.8	1,006.8	-----	78.9	−3.7	105	20	96	54	1	62	41	0	28	18	.00	−.3	.00	0	----	sw.	----	----	----	25	5	0	1.4	.0	.0	0
Yuma	142	9	54	1,002.0	1,006.1	−1.0	82.8	−1.9	114	19	101	54	7	65	48	0	43	26	.00	−.0	.00	0	5.7	s.	18	w.	4	30	0	0	.7	.0	.0	0
																																4.8		
							61.6	−3.4										47	1.54	+1.1															
MIDDLE PLATEAU																																		
Reno [1]	4,527	20	52	862.2	1,013.5	+2.3	60.4	−.7	98	20	79	30	15	41	54	161	38	56	.97	+.7	.66	4	7.6	nw.	43	s.	21	13	8	9	4.3	.0	.0	4
Tonopah	6,090	9	20	813.4	1,009.8	-----	62.0	−3.4	89	20	75	34	15	49	35	147	30	34	.19	.0	.18	3	----	w.	----	----	----	16	7	7	----	.0	.0	3
Winnemucca	4,339	5	56	866.6	1,012.5	+.6	60.4	−2.4	95	21	75	33	15	46	44	172	38	52	2.70	+2.0	1.10	8	6.9	sw.	42	s.	22	12	9	9	5.1	.0	.0	6
Modena	5,473	10	46	832.0	1,009.5	−.3	59.7	−3.6	91	21	77	33	17	42	49	176	----	----	1.36	+1.0	1.23	4	9.3	sw.	33	s.	22	14	12	4	3.7	.0	.0	4
Salt Lake City [1]	4,227	32	58	866.2	1,012.5	+1.7	60.2	−5.5	90	21	73	39	15	48	36	185	40	54	2.73	+2.0	.98	9	8.6	nw.	36	nw.	4	7	14	9	5.7	.0	.0	12
Grand Junction	4,602	60	68	856.8	1,009.5	−.7	66.6	−4.8	93	21	80	45	11	53	35	61	34	38	1.32	+.9	.87	4	7.0	se.	45	sw.	5	9	15	6	5.2	.0	.0	6
																																5.5		
							61.2	−2.2										58	0.86	−0.2															
NORTHERN PLATEAU																																		
Baker [2]	3,471	36	54	895.7	1,015.2	+1.0	56.3	−2.3	93	20	70	32	15	42	44	274	40	62	.93	−.4	.36	8	6.0	n.	28	sw.	21	6	16	8	5.5	.0	.0	3
Boise [1]	2,739	5	49	918.7	1,013.5	+.6	61.1	−3.4	102	21	74	34	15	48	41	171	40	54	.78	−.1	.33	8	10.4	nw.	35	nw.	9	6	14	10	5.9	.0	.0	3
Pocatello [1]	4,478	5	31	862.2	1,013.9	+2.4	57.3	−4.2	90	21	70	33	16	44	40	246	39	56	1.09	.0	.36	10	10.6	sw.	36	sw.	27	3	14	13	6.5	.0	.0	3
Spokane [1]	1,929	27	42	945.8	1,013.9	.0	60.5	−2.3	91	25	73	39	15	48	42	166	44	60	1.37	+.1	.56	6	7.4	sw.	30	sw.	26	6	12	12	6.5	.0	.0	3
Walla Walla	901	57	65	979.7	1,014.9	+.3	65.5	−1.9	96	20	78	44	14	54	35	71	----	----	.96	−.2	.45	7	6.1	s.	26	w.	26	10	17	3	4.3	.0	.0	1
Yakima	1,076	58	67	976.3	1,014.6	-----	66.2	−.2	97	18	79	41	13	54	35	64	----	----	.03	−.6	.03	1	8.1	nw.	27	w.	26	13	11	6	4.5	.0	.0	0
																																5.8		
							59.6	−0.2										70	0.40	−1.3															
NORTH PACIFIC COAST																																		
North Head	211	5	55	1,012.9	1,020.0	+4.4	53.8	−1.0	64	20	58	47	24	50	12	337	48	83	.55	−1.7	.15	10	14.9	n.	34	n.	22	5	9	16	6.7	.0	.0	0
Seattle [2]	125	90	321	1,014.6	1,019.0	+3.1	60.6	−.8	84	24	69	45	13	52	29	156	47	67	.55	−.8	.23	5	8.2	nw.	23	sw.	26	7	7	16	6.4	.0	.0	0
Tacoma	194	172	201	1,012.2	1,018.6	+1.7	59.2	+.5	84	20	68	43	14	50	26	186	----	----	.19	−1.3	.10	3	8.7	n.	31	sw.	26	12	6	12	5.4	.0	.0	1
Tatoosh Island	86	9	61	1,017.3	1,020.3	+3.7	53.2	+.2	63	17	58	46	23	49	16	355	49	87	.48	−2.7	.19	7	8.9	w.	34	s.	10	0	15	15	7.2	.0	.0	0
Medford [1]	1,329	29	58	969.2	1,015.9	-----	64.9	−.9	101	19	81	39	14	48	49	82	42	55	.52	−.2	.52	2	----	nw.	----	----	----	15	5	10	4.3	.0	.0	1
Portland, Oreg. [2]	154	68	106	1,013.2	1,018.6	+1.3	63.2	+.8	90	17	73	46	14	54	31	117	48	65	.41	−1.1	.37	4	6.9	nw.	19	nw.	23	7	9	14	6.3	.0	.0	1
Roseburg	510	45	76	999.7	1,018.0	+1.1	62.6	+.1	96	18	76	42	14	49	44	115	46	62	.11	−1.0	.11	2	3.5	n.	20	ne.	22	14	9	7	4.3	.0	.0	0
																																3.9		
							66.5	+2.2										59	0.21	−0.2															
MIDDLE PACIFIC COAST																																		
Eureka	60	72	88	1,016.3	1,018.0	+.4	55.3	+1.0	85	17	61	44	15	50	33	296	48	78	T	−.7	T	0	8.4	n.	32	n.	14	14	8	8	4.2	.0	.0	0
Red Bluff [1]	353	5	2	6,999.0	1,011.2	-----	76.4	+1.6	109	19	89	52	5	63	42	1	42	38	.78	+.3	.45	6	9.5	nw.	30	nw.	14	16	6	8	4.2	.0	.0	4
Sacramento	66	92	115	1,008.8	1,010.8	−1.4	73.0	+3.6	106	19	88	49	6	58	39	9	46	48	.05	−.1	.03	2	8.6	s.	30	nw.	14	19	7	4	3.1	.0	.0	2
San Francisco [2]	155	112	132	1,007.8	1,012.9	−1.7	61.3	+2.8	87	16	68	50	7	54	29	147	50	73	.01	−.2	.01	1	10.3	w.	31	w.	5	17	3	10	4.1	.0	.0	0
																																5.3		
							68.5	−0.5										63	0.13	+0.1															
SOUTH PACIFIC COAST																																		
Fresno [1]	327	5	34	998.6	1,009.5	−1.3	76.0	+.3	106	18	93	51	8	59	42	0	46	42	.24	+.2	.24	1	8.1	nw.	23	nw.	13	20	8	2	2.8	.0	.0	0
Los Angeles	338	223	250	1,001.0	1,012.9	+.4	64.6	−1.8	80	9	72	53	7	57	21	40	55	75	.01	−.1	.01	1	5.8	w.	17	w.	7	7	14	9	6.1	.0	.0	0
San Diego [1]	87	20	55	1,010.2	1,012.9	−.3	65.0	.0	74	23	70	57	1	60	15	19	55	73	.15	+.1	.15	2	7.4	w.	19	s.	14	3	14	13	6.9	0	.0	0
WEST INDIES																																		
San Juan, P. R.	82	10	54	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
PANAMA CANAL																																		
Balboa Heights	118	6	92	-----	[3]1,009.5	−.3	81.8	+1.9	93	15	88	74	13	76	17	-----	-----	75	[3]87	5.17	−3.1	1.58	19	4.8	n.	22	n.	23	0	17	13	7.2	.0	.0	7
Cristobal	27	47	97	-----	[3]1,009.8	−.4	82.4	+1.6	92	19	87	74	30	78	15	-----	-----	76	[3]82	6.62	−7.1	1.47	21	7.7	ne.	23	ne.	6	2	7	21	7.6	.0	.0	10
ALASKA																																		
Anchorage [1]	132	6	44	-----	-----	-----	53.8	−4.6	73	17	65	34	3	43	34	334	44	74	2.31	+.9	.94	16	6.8	w.	28	sw.	3	0	10	20	7.9	.0	.0	4
Fairbanks [1]	455	5	63	992.9	1,009.8	-----	51.4	-----	67	5	58	36	13	45	27	406	44	78	4.66	-----	−.9	.17	6	8.9	w.	25	w.	29	12	8	10	5.4	.2	.0	0
Juneau [1]	80	6	30	1,012.5	1,015.6	-----	40.6	−5.0	62	6	47	28	2	34	24	735	34	86	.22	-----	.09	1	9.7	ne.	26	-----	-----	1	0	29	9.7	.4	.0	0
Nome	22	25	56	1,011.9	1,012.5	-----	30.4	−4.2	46	24	34	19	1	27	16	1,039	30	96	.28	.0	.14	8	11.0	w.	28	w.	25	5	5	20	8.0	.0	.0	0
Barrow	29	5	27	1,012.2	1,012.9	-----	36.3	−2.0	49	4	40	27	9	32	15	861	34	92	.23	−.2	.03	5	7.6	se.	27	se.	10	1	3	26	8.7	.0	.0	0
Gambell	32	5	32	1,013.5	1,014.6	-----	52.0	−2.7	67	4	57	44	7	47	22	392	46	82	12.25	+5.9	3.83	21	7.6	se.	31	nw.	11	7	7	16	6.5	.7	.0	0
Ketchikan	75	69	90	1,016.3	1,016.9	-----	52.0	−2.7	67	4	57	44	7	47	22	392	46	82	12.25	+5.9	3.83	21	7.6	se.	31	nw.	11	7	7	16	6.5	.7	.0	0
Kotzebue	20	5	31	1,011.2	1,011.5	-----	37.0	−6.4	54	24	42	25	10	32	17	839	34	92	.57	+.1	.30	8	10.8	w.	-----	-----	-----	2	11	17	7.2	T	.0	4
Northway	1,718	5	32	948.5	1,011.2	-----	52.6	-----	71	14	63	32	1	42	29	375	40	67	2.96	-----	.66	15	6.2	nw.	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
HAWAII																																		
Honolulu	38	86	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

[1] Data are airport records.
[2] Barometric data (adjusted to old city elevation) and hygrometric data from airport; other wise city office records.
[3] Observations taken bihourly.
[4] Pressure (adjusted to old city elevation), temperature, and hygrometric data from airport; otherwise city office records.
Temperature and precipitation from city records, other data from airport.

NOTE.—Except as indicated by notes [1], [2], [4], and [5] data in table are city office records.

SEVERE LOCAL STORMS, JUNE 1945

[Compiled by MARY O. SOUDER]

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	June 1945						
Minneapolis and St. Paul, Minn.	1	2 p. m., C. W. T.			$2,000	Electrical	Several places struck by lightning.
Fort Wayne, Ind.	1	6 p. m.	[1]1		500	Hail	Property damaged.
Wheatfield, Ind., and vicinity.	1	3 p. m.	[1]4		16,000	do	Loss in crops, $8,000; property damage, $8,000; path, 20 miles long.
Waukegan, Ill.	1				25,000	do	Property damaged, $25,000; some crops ruined.
Two Buttes, Colo.	2	4 p. m.	3½		15,000	do	Principal loss in grain.
Houston, Tex.	3	4:30 p. m.				Wind	Glider and automobile badly damaged; fire house moved from its foundation.
Madden and Dixon, Miss.	3	6-7 p. m.	[1]1-8½		10,000	Hail	Loss in crops, $10,000; small property damage.
Cottonwood, Ill.	3				3,000	Electrical	Livestock killed.
Mulberry, Fla.	5	1:30 p. m.				Hail	Trees, shrubbery, windows, and roofs damaged. Storm occurred over small crop area. Loss considerable, not estimated.
Miami, N. Mex.	6	6-8 a. m.				Hail and rain	Loss of 4,000 sheep.
Springer, N. Mex.	6	8 a. m.	[1]50			do	3,200 sheep lost.
Posey County, Ind.	7	7 a.m.	[1]10		3,000	Wind	Buildings and trees damaged.
Denver, Colo.	8	1:30 p. m.	[1]2			Hail	Much loss in gardens.
Wichita Falls, Tex.	8	5:48 p. m.	[1]4	1	385,000	Wind	Loss in crops, $200,000; property damaged, $185,000.
Jamestown, N. Y.	10	9:30 p. m.	176	0	5,000,000	Tornado	Path followed the west side of the city; 10 persons injured, Property damaged; some smaller buildings entirely flattened. Communication lines and electric service disrupted as broken trees, electric wire, and telephone poles littered streets; path, 1 mile long.
Abilene, Tex.	11	6:30 p. m.	[1]20		1,500	Hail	Loss principally in grain.
Tuscola, Tex.	11	7 p. m.	100	0	10,000	Tornado	Property damaged; 2 persons injured.
Brady, Tex.	11	11:45 p. m.	400	1	500,000	do	Business property damaged; 5 persons injured.
Mexia, Tex.	11				500,000	Wind and rain	Chief damage in crops.
Athens, Tex.	12	12:30 a. m.	880	1		Tornado	Several persons injured.
Bluffton, Ind., vicinity of.	12	11 p. m.	33	0	1,000	do	Path 8 miles long; no details.
Bargersville, Ind., southeast of.	13	12:30 a. m.	200	0	20,000	do	Path southwest to northeast and 11 miles long; no details.
Lexington, Ill.	13				25,000	Electrical	Property damaged.
Hammond, La.	14	1:40 p. m.	400	0	40,000	Tornado	Property damaged, $40,000; small crop loss not estimated; path 1,200 yards long.
Cortland, Groton, McLean, and Montour Falls, N. Y.	15	p. m.			1,000,000	Thunderstorm	Flood conditions prevailed in Montour Falls where a dyke broke. Water in the streets 6 feet high at times. Severe damage occurred at Groton and McLean. Barns, small buildings, and power lines blown down; livestock killed, several persons injured, and crops ruined. In Groton more than 100 trees uprooted, 1 an elm 7 feet in diameter.
Bloomington, Ill.	15				11,000	Electrical	Property damaged, $10,000; loss in crops, $1,000.
Streator, Ill.	15				70,000	Wind	Property damaged.
Vermont, Ill.	15				25,000	Electrical	1 person injured.
Tompkins County, N. Y., northern portion.	15				1,600,000	Thunderstorm, hail, and violent winds.	Barns wrecked, houses damaged, livestock killed, power and communication lines broken, trees uprooted, and crops washed out and damaged by hail. 2 persons injured by falling building. Property damage, $1,100,000; loss in crops and damage to farm lands.
Ohio, vicinity of Findlay and along the Scioto River in many places from the upper course southward as far as Circleville.	15-18				40,000	Heavy rain and flood.	Total loss in crops and some damage to highways.
Marion, Ind.	16	1 a. m.			250,000	Electrical	School building struck by lightning and burned.
Parke and Vigo to Hancock and Decatur Counties, Ind.	16	2-4 p. m.		3	510,000	Wind	Widespread damage to buildings, trees, wires, and aircraft. Property damaged, $500,000; crop loss, $10,000.
Marianna, Fla.	16				6,745	Electrical	Barn at Florida Industrial School for Boys destroyed.
Ipava, Ill.	16				15,000	do	Property damaged.
Paris, Ill.	16				8,000	do	Do.
Johnson County, Ind.	16				200,000	Wind	Do.
Terre Haute, Ind.	16			1	194,000	do	Buildings wrecked, killing 1 person, and injuring 3.
Belmont, N. Y., and vicinity.	16				25,000	Rain, wind, and hail.	Property damaged; loss in crops.
Maine, N. Y.	16					Thunderstorm	A flash flood swept through this village, carrying a 5-foot wall of water into the area of greatest habitation. Basements flooded and 3 bridges carried out, with many acres of market gardens destroyed. Damage not estimated.
Newnan and Dawson, Ga.	17				10,000	Hail	Loss in crops.
Saratoga Springs, N. Y.	21		[1]5		16,500	do	Loss in truck, $14,000; poultry killed and property damaged, $2,500; path 10 miles long.
Palmer Lake, Black Forest, Husted, and Monument, Colo., and vicinities.	22	3 p. m.	[1]2			do	Much crop loss not estimated.
La Belle, Fla.	23	9 p. m.	33-66	0	2,500	Tornado	House blown from its foundation; some orange trees uprooted; path 440 yards long.
West Virginia, north and north-central portions; Pennsylvania, and extreme western Maryland.	23	p. m.		142	5,000,000	Tornado, thunderstorms, hail, and heavy rain.	98 dead and 1 missing in West Virginia and 44 dead in Pennsylvania. In Meadowville, W. Va., the store and all but 2 of the town buildings destroyed. Articles from the store strewn for quite a distance in all directions. All communication systems badly disorganized.
Melbourne, Fla., vicinity of Indiatlantic Beach	24	2:57 a. m.	25	0	3,500	Tornado	A transformer blown from a platform about 30 feet high and a section of the railing on the east end of the causeway ripped off; house damaged; path 1 mile long.
Lamar, Wiley, Walsh, and Two Buttes, Colo.	24	9:30 p. m.	[1]20		100,000	Hail	Loss in grain, gardens, and row crops 50 to 100 percent. More than 1,000 turkeys killed; much damage to buildings and automobiles.

See footnote at end of table.

SEVERE LOCAL STORMS, JUNE 1945—Continued

[The table herewith contains such data as has been received concerning severe local storms that occurred during the month. A revised list of tornadoes will appear in the United States Meteorological Yearbook]

Place	Date	Time	Width of path, yards	Loss of life	Value of property destroyed	Character of storm	Remarks
	June 1945						
Florida	24–27			0	75,000	Tropical storm and associated tornado.	The storm moved into Florida between Brooksville and Dunnellon, near the Hernando-citrus county line about 4 a. m., June 24. It lost hurricane force either before or shortly after striking land, but retained a center intact while passing across Florida, attended by heavy rain and winds up to 45 to 55 miles per hour over much of the central and northern portions of the peninsula. It passed into the Atlantic between Daytona Beach and St. Augustine about noon of the 24th. After entering the Atlantic it regained hurricane force for a time as it moved northeastward off the coast of Georgia and South Carolina, but weakened again to less than hurricane before it reached the North Carolina Capes during the night of the 25th. The center passed over or very near Cape Hatteras at about midnight of the 25th, with winds up to 80 miles per hour or somewhat higher. After leaving the North Carolina Capes there are indications that the storm increased to hurricane force again over open water as it continued northeastward to a position south of the Maine coast on the 27th, and thereafter lost force and died out. Damage in Florida and along the coast of Georgia and the Carolinas was small. A tornado occurred in connection with the storm a few miles from Melbourne, Fla., causing some damage. In the entire Miami district about $75,000 was estimated. Many thousands of persons were evacuated from low beaches and islands, 5,000 from the beaches near Wilmington alone, and this undoubtedly was the reason for no loss of life.
Marienthal, vicinity of, through Scott City, Kans.	25	8 p. m., M. W. T.	[1] 5	.....	290,000	Heavy hail	Chief loss in wheat; path 25 miles long.
Tiffin, Ohio, vicinity of	25	.....	.....	.....	15,000	Hail	Loss in crops.
Hooppole, Ill	27	9 p. m	[1] 1	1	3,100,000	Tornadoes	A tornado entered western Illinois, crossing the Mississippi River from the northeastern edge of Davenport, Iowa. No important damage occurred until the storm reached Hooppole, Ill. Homes on at least 25 farms were wrecked, 48 persons injured, livestock and poultry losses heavy, and many crops ruined. Everything destroyed along a path approximately 12 miles long. Between 10:15 and 10:30 p. m., another tornado developed, but its intensity was not as great as the previous one. The path of destruction was along the northern edge of Bureau County. It appeared in the vicinity of La Salle, Ill., between 11:00 to 11:25 p. m. Here the destruction occurred over an area 8 miles wide and nearly 25 miles long. Between the Bureau County and the La Salle, Ill., tornado, several funnel clouds developed simultaneously. Damage estimated from the series of tornadoes: $2,200,000 property damage; $700,000 loss in crops; $200,000, livestock killed. In addition 46 persons were killed.
Oconomowoc and Silver Lake, Wis.	27	p. m	.....	.....	1,900	Electrical	Several houses, some trees, and telephone lines damaged.
Weyauwega, Wis., vicinity of.	27	do	.....	.....	2,100	do	Barn, 2 silos, and smaller buildings burned.
Green Bay, Wis., vicinity of	27	.....	.....	.....	4,000	.....	16 Holstein cattle on a farm killed.
Hillsboro, Wis	27	.....	.....	.....	1,800	Electrical	Barn struck by lightning and burned.
Kenosha County, Wis	27–28	9 p. m.–4 a. m., C. W. T.	.....	.....	50,200	Thunderstorms, excessive rains, flash flood.	Utility service disrupted, chimneys damaged, large stained glass church window broken, roads damaged by erosion, and some fields badly washed necessitating new plantings.
Broadhead, Wis., and vicinity.	28	.....	.....	.....	4,000	Electrical	2 barns struck by lightning and burned.
Electra, Tex	29	.....	[1] 2	.....	100,000	Wind	No details.
Indianapolis, Ind	30	5 p. m	.....	.....	1,000	do	Damage to power lines and trees.
Salem, Ind	30	do	.....	.....	3,000	Flash flood	Brock Creek highest known; business houses and farm lands flooded; property damage, $2,000; crop loss, $1,000.
Ottawa, Kans	30	8:15–8:30 a. m	[1] 8	.....	300,000	Heavy hail	Much broken glass in business section; extensive damage to roofs, electric signs, and cars; severe crop loss and damage to trees; path 12 miles long.
Lincoln, Ill	30	.....	.....	.....	25,000	Electrical	Property damage, $15,000; loss in crops, $10,000.
Milton, Ill	30	.....	.....	.....	3,000	do	Property damaged.
Mt. Sterling, Ill	30	.....	.....	.....	5,000	do	Do.
Quincy, Ill	30	.....	.....	.....	110,000	do	Property damaged, $60,000; loss in crops, $50,000.
Rockport, Ill	30	.....	.....	.....	5,000	do	Property damaged.
White Hall, Ill	30	.....	.....	.....	55,000	do	Property damaged, $30,000; loss in crops, $25,000.
Franklin County, Kans	30	.....	.....	.....	750,000	Hail	Property damaged; loss in crops.

NOTES.—The late reports for month of May will appear in the next issue.

[1] Miles instead of yards.

SOLAR RADIATION AND SUNSPOT DATA FOR JUNE 1945

[Solar Radiation Investigation Section, I. F. HAND, in charge]

SOLAR RADIATION OBSERVATIONS

Explanations of the tables and references to descriptions of instruments, stations, and methods of observations, and to summaries of data, are given in the January 1944 REVIEW, page 43. A list of the pyrheliometric stations also is given on page 45 of the same REVIEW.

TABLE 1.—*Solar radiation intensities during June 1945*

[GRAM CALORIES PER MINUTE PER SQUARE CENTIMETER OF NORMAL SURFACE]

MADISON, WIS.

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M.				*1.0	P. M.				75th mer. time
	e.	5.0	4.0	3.0	2.0		2.0	3.0	4.0	5.0	e.
1945	*mb.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
June 4	6.6	0.68	0.83	0.98	1.15	1.40					6.9
June 5	8.1			.86	1.06	1.39					9.4
June 6	8.5	.75	.86	.96	1.11	1.26					10.2
June 18	13.2	.74	.83	.95	1.06	1.39					11.8
June 19	12.3	.68	.77	.79							11.8
June 21	14.8	.66	.76	.88	1.04	1.28					15.8
June 22	15.3	.62	.75	.86	1.06	1.32					15.8
June 23	20.4	.39	.48	.62	.74	1.06					21.8
June 26	11.4			.98	1.11	1.36					12.7
June 27	17.7				.83	1.06					21.8
Means		.65	.75	.88	1.02	1.28					
Departures		−.01	−.05	−.05	−.02	−.05					

LINCOLN, NEBR.

June 1	14.6					1.40					14.2
June 13	17.7					1.30	1.01	0.79	0.62	0.56	16.9
June 16	12.3					1.42					11.8
June 21	16.4					1.34	1.17	1.03	.92	.82	11.0
June 25	14.6						.99	.71	.58	.47	13.7
Means						1.36	1.06	.84	.71	.62	
Departures						.00	−.04	−.06	−.07	−.04	

ALBUQUERQUE, N. MEX.

June 1	2.3	0.75	0.83	0.95			1.20				4.4
June 2	3.8						1.15				4.8
June 3	4.6						1.20		1.02	0.95	4.2
June 4	4.0				1.16	1.37	1.21	1.16	1.11	1.05	4.4
June 5	2.7	.88	.94	1.04	1.16				.96		3.6
June 6	4.2	.81	.86	1.02	1.12	1.40				.98	3.6
June 7	3.4					1.40	1.22	1.14	1.08		3.6
June 9	3.3	.73	.82	.98	1.10						3.8
June 10	3.2		.86	.99							4.4
June 12	5.8	.68	.77	.93	1.05	1.36	1.25	1.21	1.16	1.14	6.3

TABLE 1.—*Solar radiation intensities during June 1945*—Continued

ALBUQUERQUE, N. MEX.—Continued

Date	Sun's zenith distance: 7:30 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	1:30 p. m.
	75th mer. time	Air mass: A. M.				*1.0	P. M.				75th mer. time
	e.	5.0	4.0	3.0	2.0		2.0	3.0	4.0	5.0	e.
1945	*mb.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mb.*
June 13	4.6	0.86	0.92	1.04	1.16	1.37	1.29	1.24	1.19	1.16	5.2
June 14	3.3	.86	.95	1.05	1.16	1.44	1.27	1.20	1.16	1.14	4.6
June 15	4.2	.76									4.4
June 16	7.0	.70	.76	.92	1.08	1.40	1.25	1.20	1.16	1.10	6.5
June 17	7.3		.78	.93	1.03	1.48	1.29	1.29	1.21	1.20	5.6
June 18	2.6	.86	.91	1.00	1.14	1.38	1.27	1.24	1.23	1.20	3.8
June 19	5.0	.65	.71	.84	1.02	1.41	1.21		1.03	1.01	6.5
June 20	2.7	.71	.79	.94	1.08						5.2
June 21	7.3			.86	.98						5.8
June 22	7.3	.61	.69	.83	1.01	1.34	1.06				6.5
June 23	8.5	.61	.69	.80	.94	1.33					4.2
June 24	3.3	.73	.82	.91	1.02	1.44		.85			3.6
June 26	4.2	.68	.77	.90	1.00	1.43	1.23	1.18	1.12	1.10	3.6
June 27	1.4	.90	.98	1.09	1.23	1.43					2.7
June 28	2.3	.75	.85	.98	1.11	1.35	1.14				3.6
June 29	3.4						1.15	1.01	.86	.79	3.3
June 30	3.2	.71	.78	.91	1.11	1.39	1.08	.98	.80	.72	5.0
Means		.75	.78	.95	1.08	1.40	1.20	1.14	1.08	.96	
Departures		−.08	−.13	−.08	−.10	−.04	−.02	+.03	+.07	+.04	

BOSTON, MASS.

June 14	19.6	0.40	0.47	0.58	0.66						21.8
June 21	15.8		.50	.56	.79	1.04					21.1
June 23	15.3		.82		1.07						17.7
June 29	19.6	.43	.45	.50	.71						18.3
Means		(.42)	.56	.55	.81	(1.04)					

BLUE HILL, MASS.

June 1	5.1	Record	Lost	0.82	1.11						3.5
June 3	10.6						0.98				9.1
June 7	9.0	0.76	0.85	1.02	1.19						8.9
June 13	14.0			.95							18.1
June 14	19.4	.49	.59	.70	.91						19.6
June 15	23.0	.61	.72	.87							24.0
June 20	20.9						1.18		0.86	0.77	18.9
June 21	17.9	.57	.66	.75	.97						21.4
June 22	18.7								.74	.63	17.0
June 23	14.9	.78	.89		1.01			1.04			16.7
June 24	13.2			1.13	1.25		1.17	.82	.71	.59	14.0
Means		.64	.74	.89	1.07		1.11	(.93)	.77	.66	
Departures		−.01	−.02	.00	+.02		+.06	+.08	+.11	+.11	

Ratio, Boston/Blue Hill, on comparable dates.

		0.82	0.75	0.79	0.98						

*Extrapolated.

TABLE 2.—*Daily totals and weekly means of solar radiation (direct + diffuse) received on a horizontal surface*

[Gram calories per square centimeter]

Date	Washington, D. C.	Madison, Wis.	Lincoln, Nebr.	East Lansing, Mich.	New York, N. Y.	Fresno, Calif.	Fairbanks, Alaska	Columbia, Mo.	Boston, Mass.	Nashville, Tenn	Twin Falls, Idaho	La Jolla, Calif.	Riverside, Calif.	Blue Hill, Mass.	Ithaca, N. Y.	Newport, R. I.	State College, Pa.	Put-in-Bay, Ohio	East Wareham, Mass.	Davis, Calif.	Boulder, Colo.	Tooele, Utah
1945	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*
June 4	547	785	179	250	66	718	581	505	381	525	147	441	271	367	270	194	279	477	240	692	454	413
June 5	587	738	76	534	149	741	517	173	118	637	322	307	589	168	241	228	340	614	225	582	408	284
June 6	620	637	49	477	620	752	418	335	347	124	487	564	525	388	426	250	578	657	312	705	408	521
June 7	550	240	188	553	731	657	285	482	444	176	330	532	444	514	699	538	702	683	494	773	408	754
June 8	513	514	192	661	603	750	267	120	414	380	587	552	488	466	752	514	647	714	487	764	408	667
June 9	268	423	318	382	509	712	358	455	477	499	236	540	562	575	345	479	481	330	646	730	408	725
June 10	416	293	471	289	118	723	455	491	302	470	546	368	296	354	178	190	168	434	419	791	408	822
Means	500	519	210	449	399	722	412	365	355	402	379	472	453	405	416	342	456	558	403	719	414	398
Departures	−10	+10	−295	+26	−94	+43	−86	−14	−127	−121	−194	−52	−74	−119	−88	−205	−16	+28	−136	+13	−42	-------
June 11	519	360	710	430	341	738	482	550	289	359	645	611	704	341	363	335	521	346	346	804	408	874
June 12	628	453	692	434	554	737	539	285	487	582	661	603	683	594	429	506	538	531	520	805	744	883
June 13	574	638	744	458	331	735	500	642	276	653	701	583	675	406	340	532	281	595	554	844	728	886
June 14	584	554	226	374	495	752	194	343	489	466	525	140	580	636	608	648	583	643	673	799	310	808
June 15	675	175	67	266	523	765	519	230	454	441	737	451	659	498	510	620	482	338	652	846	278	906
June 16	672	355	695	280	608	733	596	144	415	434	725	323	665	428	457	609	434	448	551	813	387	912
June 17	732	549	723	241	587	732	521	344	443	367	718	217	662	455	-------	569	477	220	615	810	744	938
Means	626	441	551	355	491	742	479	362	408	472	673	418	661	480	451	546	474	446	559	817	514	887
Departures	+121	−61	+15	−130	+7	+47	−30	−58	−34	−64	+58	−109	+91	−2	−37	+51	−16	−118	+34	+63	−18	-------
June 18	523	780	591	565	487	721	422	549	529	243	699	262	676	642	371	317	490	608	315	777	766	904
June 19	237	694	646	671	231	576	514	740	259	566	671	586	539	519	445	634	264	620	661	772	477	894
June 20	613	315	730	390	532	698	447	315	107	570	558	222	576	202	670	337	529	704	232	718	508	844
June 21	601	769	768	350	429	647	411	710	495	590	574	108	121	608	272	537	500	463	587	800	724	804
June 22	680	760	696	644	433	700	589	650	402	632	275	313	342	516	703	484	733	739	521	764	547	509
June 23	738	735	697	489	687	672	609	698	579	700	443	637	474	704	713	659	684	734	728	515	356	698
June 24	710	531	589	598	590	482	650	402	652	641	574	177	627	750	670	711	653	661	745	580	324	856
Means	586	655	674	530	484	642	520	580	432	563	542	329	479	563	549	526	550	647	541	704	529	786
Departures	+81	+116	+92	−7	−9	−69	−20	+26	+27	−3	−126	−253	−121	+25	+40	−26	+24	+44	+35	−46	−53	-------
June 25	363	682	723	267	399	712	597	504	494	493	456	577	379	648	513	596	504	435	603	628	521	549
June 26	447	740	537	686	110	720	182	543	30	527	393	291	670	100	516	82	622	762	134	765	528	806
June 27	728	614	671	368	681	724	510	579	190	620	688	362	358	213	758	326	758	502	134	815	628	888
June 28	646	367	602	442	498	733	230	588	384	674	731	365	577	426	340	575	426	538	338	819	526	897
June 29	606	675	619	468	371	729	382	413	466	634	402	307	598	594	383	591	511	524	601	785	569	771
June 30	564	512	532	434	599	717	510	402	382	634	708	263	614	580	624	603	589	531	620	800	388	943
July 1	663	649	628	549	522	689	230	370	551	593	720	143	586	674	614	630	642	517	687	780	528	912
Means	574	606	616	459	454	718	377	486	357	596	586	330	540	462	535	486	579	544	445	770	514	836
Departures	+41	+63	+28	−61	−32	+17	−82	−104	−77	+47	−45	−204	−49	−32	+41	−57	+48	−60	−53	+1	−48	-------

ACCUMULATED DEPARTURES ON JULY 1, 1945

	+3, 234	+3, 927	−5, 019	−3, 332	−3, 199	+1, 001	−1, 372	−770	−1, 757	−4, 319	−7, 987	−9, 590	−1, 071	−4, 403	−2, 961	−5, 411	+4, 284	+287	−987	+63	-------	-------

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1945

By LUCY T. DAY
[Equatorial Division, U. S. Naval Observatory]

[Communicated by Commodore J. F. Hellweg, U. S. N. (Ret.) Superintendent, U. S. Naval Observatory.] All measurements and spot counts were made at the Naval Observatory from plates taken at the observatories indicated. Difference in longitude is measured from the central meridian, positive toward the west. Latitude is positive toward the north. Areas are corrected for foreshortening and expressed in millionths of Sun's hemisphere. For each day, under longitude, latitude, area of spot or group, and spot count are included assumed longitude of center of the disk, assumed latitude of center of the disk, total area of spots and groups, and total spot count.

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
June 1	10 23	7768	−52	293	−7	52	6	2	G	U. S. Naval.
		7763	+38	23	−18	41	6	2		
		7767	+55	40	+31	61	121	9		
		7767	+60	45	+31	65	73	10		
				(345)	(−1)		206	23		
2	11 9	7769	−35	296	+21	40	12	2	F	Do.
		7767	+69	40	+31	71	97	1		
		7767	+72	43	+31	75	48	3		
				(331)	(0)		157	6		
3	10 10	7770	−74	245	−19	75	97	1	G	Mt. Wilson.
		7769	−22	297	+21	30	12	1		
		7767	+82	41	+30	82	73	2		
				(319)	(0)		182	4		
4	11 36	7770	−60	245	−19	62	73	1	G	U. S. Naval.
		(*)	−10	295	−8	13	12	1		
		7769	−9	296	+21	23	12	2		
				(305)	(0)		97	4		
5	10 22	7770	−47	245	−19	50	48	1	G	Do.
		7769	+4	296	+21	21	12	1		
		(*)	+70	2	−27	71	6	2		
				(292)	(0)		66	4		
6	10 33	7771	−44	235	−22	48	24	3	F	Do.
		7770	−34	245	−19	39	61	1		
		7769	+18	297	+20	27	24	1		
				(279)	(0)		109	5		
7	10 36	7771	−32	234	−22	38	12	4	F	Do.
		7770	−20	246	−19	27	48	1		
				(266)	(0)		60	5		
8	11 12	7770	−7	245	−19	21	36	1	F	Do.
				(252)	(0)		36	1		
9	10 37	7771	−12	227	−21	23	36	1	F	Mt. Wilson.
		7771	−10	229	−20	22	61	1		
		7771	−7	232	−20	22	61	1		
				(239)	(0)		158	3		
10	12 34	7773	−85	140	−32	85	242	1	F	U. S. Naval.
		7772	−79	146	−18	80	97	1		
		7771	+1	226	−21	21	109	1		
		7771	+6	231	−22	22	109	2		
				(225)	(0)		557	5		
11	10 41	7773	−72	141	−32	75	291	1	VG	Do.
		7772	−65	148	−17	67	61	3		
		7771	+12	225	−23	27	48	3		
		7771	+14	227	−22	26	145	6		
		7771	+18	231	−22	30	85	1		
				(213)	(+1)		630	14		
12	11 17	7775	−80	119	−24	80	194	2	G	Do.
		(*)	−65	134	−25	68	12	1		
		7773	−59	140	−32	65	388	1		
		7772	−50	149	−18	52	48	1		
		7774	+7	206	−23	25	12	2		
		7771	+25	224	−24	35	48	1		
		7771	+26	225	−23	35	24	1		
		7771	+27	226	−22	36	61	1		
		7771	+29	228	−22	37	12	1		
		7771	+31	230	−22	38	73	2		
				(199)	(+1)		872	13		

See footnotes at end of table.

660591—45——2

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1945—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
June 13	11 6	7775	−79	107	−28	79	291	3	G	U. S. Naval.
		7775	−68	118	−24	70	97	2		
		7775	−65	121	−24	68	145	2		
		7776	−65	121	−20	67	6	1		
		7773	−46	140	−32	54	339	1		
		7772	−37	149	−18	42	48	1		
		7774	+19	205	−23	31	48	7		
		7774	+21	207	−23	32	6	1		
		7771	+38	224	−23	43	6	1		
		7771	+39	225	−22	43	6	1		
		7771	+40	226	−21	45	48	4		
		7771	+44	230	−21	48	36	2		
				(186)	(+1)		1076	26		
14	10 30	7775	−65	108	−28	68	291	6	VG	Do.
		7775	−55	118	−23	58	97	2		
		7775	−52	121	−23	56	109	3		
		7776	−50	123	−22	53	6	1		
		7773	−34	139	−32	45	339	1		
		7772	−24	149	−18	31	48	2		
		7774	+31	204	−23	39	36	3		
		7771	+52	225	−22	56	12	2		
				(173)	(+1)		938	20		
15	10 24	7775	−50	110	−28	57	194	7	G	Do.
		(*)	−47	113	+25	51	6	3		
		7775	−40	120	−23	45	73	3		
		7775	−37	123	−23	43	97	3		
		7778	−31	129	+21	37	6	2		
		7773	−22	138	−32	39	339	1		
		7772	−11	149	−18	22	24	2		
		7777	−1	159	+22	21	24	2		
		7774	+45	205	−22	49	24	6		
				(160)	(+1)		787	29		
16	10 33	7779	−49	97	+26	53	12	3	VG	Do.
		7775	−37	109	−28	45	194	16		
		7775	−33	113	−26	41	12	1		
		7775	−27	119	−25	38	170	18		
		7776	−25	121	−20	33	6	4		
		7773	−9	137	−32	34	291	1		
		7773	−5	141	−31	33	12	6		
		7772	−1	145	−17	18	12	1		
		7772	+1	147	−17	18	12	1		
		(*)	+68	214	−19	69	24	4		
				(146)	(+1)		745	55		
17	11 27	7775	−27	106	−28	38	24	1	F	Do.
		7775	−23	110	−27	37	145	5		
		7775	−20	113	−26	33	48	2		
		7775	−14	119	−24	28	194	7		
		7776	−9	124	−19	22	12	1		
		7773	+5	138	−32	33	242	1		
		7772	+17	150	−19	27	36	1		
		7774	+64	197	−22	67	24	2		
				(133)	(+1)		725	20		
18	21 39	7775	−9	110	−28	30	170	6	F	Do.
		7775	−4	115	−26	37	73	2		
		7775	0	119	−23	24	36	1		
		7775	+2	121	−25	26	194	5		
		7776	+5	124	−19	20	12	3		
		7773	+19	138	−32	37	218	1		
		7772	+30	149	−19	36	36	1		
				(119)	(+1)		739	19		
19	11 16	7781	−81	25	−16	81	97	1	G	Do
		7779	−12	94	+28	30	24	4		
		7779	−8	98	+27	26	36	2		
		7775	+4	110	−27	29	24	3		
		7775	+11	117	−23	27	12	1		
		7775	+12	118	−25	29	24	3		
		7775	+15	121	−25	30	194	5		
		7775	+18	124	−25	33	12	1		
		7780	+23	129	−14	27	24	4		
		7780	+25	131	−17	31	61	6		
		7773	+30	136	−32	43	218	1		
		7772	+41	147	−18	46	6	1		
		(*)	+51	157	−14	53	6	1		
				(106)	(+2)		738	33		

See footnotes at end of table.

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1945—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
June 20	10 18	7781	−70	24	−14	72	48	1	F	U. S. Naval.
		7781	−68	26	−14	70	121	1		
		7782	−19	75	+13	22	12	2		
		7782	−15	79	+11	18	6	1		
		7779	0	94	+28	26	48	5		
		7779	+6	100	+25	24	73	5		
		7775	+25	119	−25	36	36	8		
		7776	+25	119	−17	32	6	2		
		7775	+28	122	−26	40	194	2		
		7780	+39	133	−15	42	12	1		
		7780	+42	136	−17	45	24	1		
		7773	+42	136	−32	51	218	1		
				(94)	(+2)		798	30		
21	10 34	7781	−62	18	−19	65	73	2	G	Do.
		7781	−57	23	−15	59	48	1		
		7781	−55	25	−15	58	145	3		
		7779	+20	100	+25	30	61	5		
		7775	+40	120	−22	46	73	7		
		7775	+42	122	−24	48	206	6		
		7773	+56	136	−32	62	218	1		
				(80)	(+2)		824	25		
22	10 45	7781	−49	18	−19	52	73	10	VG	Do.
		7781	−43	24	−15	46	48	4		
		7781	−41	26	−15	44	194	3		
		7779	+27	94	+28	37	6	1		
		7779	+33	100	+25	43	48	1		
		7775	+53	120	−23	59	36	3		
		7775	+57	124	−24	61	242	2		
		7773	+69	136	−32	71	218	1		
				(67)	(+2)		865	25		
23	10 37	7781	−37	17	−19	42	73	8	G	Do.
		7781	−32	22	−17	37	24	6		
		7781	−30	24	−15	33	97	5		
		7781	−28	26	−15	32	145	1		
		7779	+46	100	+25	50	24	1		
		7775	+69	123	−25	71	242	1		
		7773	+83	137	−32	83	218	1		
				(54)	(+2)		823	23		
24	10 46	7781	−24	16	−23	33	6	1	G	Do.
		7781	−23	17	−19	30	73	6		
		7781	−20	20	−17	27	24	7		
		7781	−16	24	−15	23	145	10		
		7779	+59	99	+27	62	12	1		
		7779	+67	107	+26	70	12	2		
		7775	+84	124	−25	84	242	1		
				(40)	(+2)		514	28		
25	9 15	7781	−10	18	−19	23	61	4	G	Mt. Wilson.
		7781	−3	25	−15	17	170	16		
		7779	+75	103	+26	76	24	1		
				(28)	(+2)		255	21		
26	10 48	7783	−20	354	−18	28	12	1	P	U. S. Naval.
		7781	+6	20	−20	23	61	4		
		7781	+11	25	−16	20	48	1		
		7781	+12	26	−15	21	61	2		
		7781	+13	27	−14	20	24	1		
				(14)	(+2)		206	9		
27	11 12	7784	+18	19	−20	28	48	3	F	Do.
		7784	+19	20	−23	31	24	7		
		7781	+23	24	−16	28	24	2		
		7781	+25	26	−15	30	73	3		
		7781	+27	28	−14	31	48	1		
				(1)	(+2)		217	16		

POSITIONS, AREAS, AND COUNTS OF SUNSPOTS FOR JUNE 1945—Continued

Date	Eastern standard time	Mount Wilson group No.	Heliographic: Difference in longitude	Heliographic: Longitude	Heliographic: Latitude	Heliographic: Distance from center of disk	Area of spot or group	Spot count	Plate quality	Observatory
1945	h m		°	°	°	°				
June 28	10 42	7781	+30	18	−18	35	24	2	G	U. S. Naval.
		7784	+30	18	−23	37	16	4		
		7781	+32	20	−20	38	24	3		
		7784	+34	22	−22	40	48	4		
		7781	+38	26	−15	41	73	5		
				(348)	(+3)		185	18		
29	10 46	(*)	−30	304	−11	32	6	1	G	Do.
		7785	−20	314	−32	38	24	5		
		7784	+44	18	−23	50	48	5		
		7784	+49	23	−23	53	48	2		
		7781	+51	25	−15	54	61	1		
				(334)	(+3)		187	14		
30	10 39	7785	−6	315	−30	33	12	2	G	Do.
		7784	+57	18	−23	60	12	5		
		7784	+60	21	−23	64	24	1		
		7781	+64	25	−15	66	73	1		
				(321)	(+3)		121	9		

Mean daily area for 30 days = 462

*Not numbered.
VG = very good; G = good; F = fair; P = poor.

PROVISIONAL RELATIVE SUNSPOT NUMBERS FOR MAY 1945

[Based on observations at Zurich except as indicated by an asterisk. Data furnished through the courtesy of Prof. W. Brunner, Swiss Federal Observatory, Zurich, Switzerland]

May 1945	Relative numbers	May 1945	Relative numbers	May 1945	Relative numbers
1	*b* 62	11	20	21	27
2	55	12	8	22	19
3	52	13	0	23	*Ec* 26
4	*42	14	*d* 9	24	*d* 32
5	34	15	*Wc* 22	25	*Wc* 36
6	*Mac* 43	16	43	26	24
7	35	17	46	27	31
8	20	18	50	28	23
9	34	19	47	29	22
10	16	20	26	30	19
				31	28

Mean, 31 days = 30.7

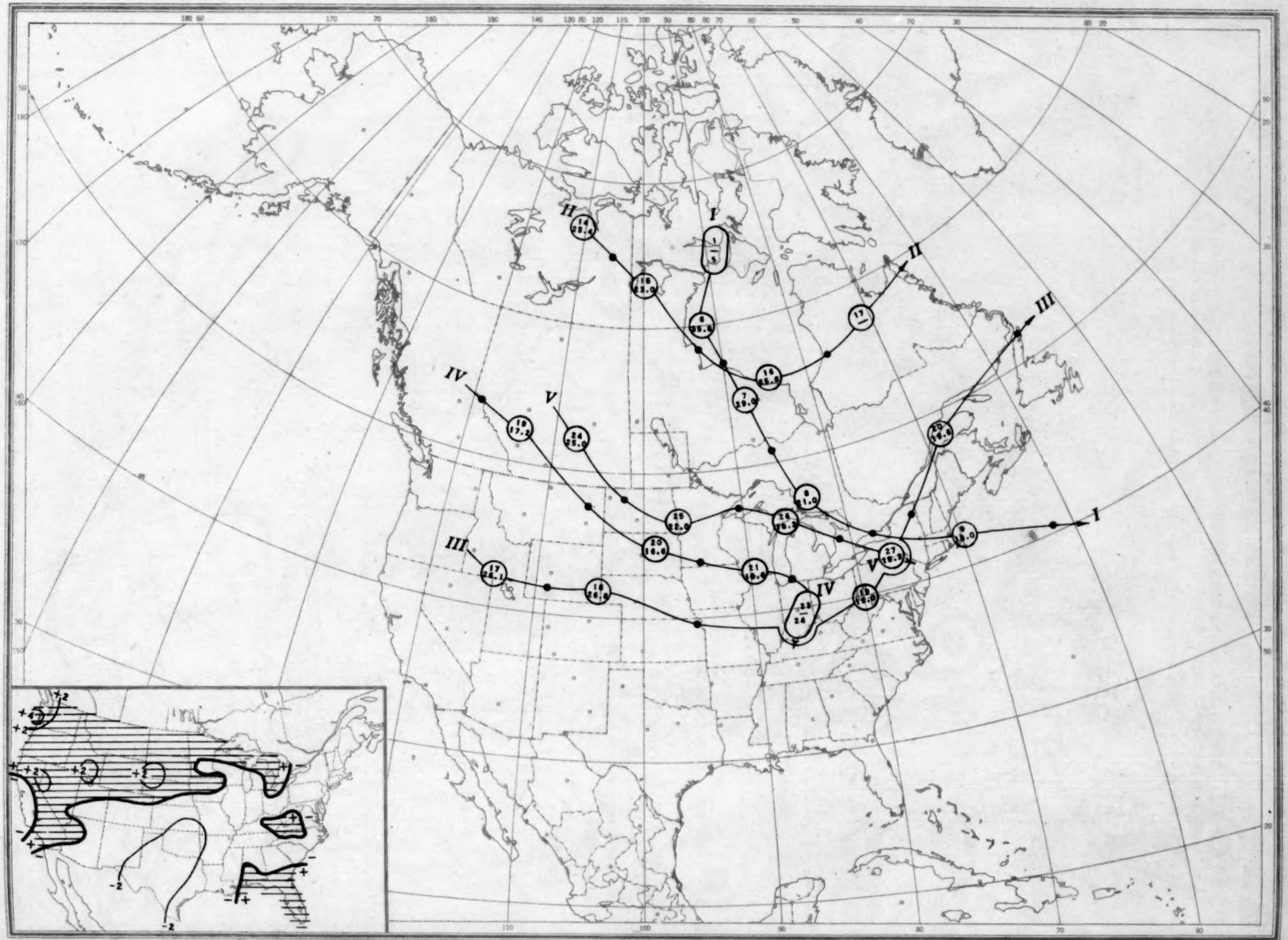
* Observed at Locarno.
a Passage of an average sized group through the central meridian.
b Passage of a large group through the central meridian.
c New formation of a group developing into a middle sized or large center of activity; E, on the eastern part of the Sun's disc; W, on the western part; M, in the central circle zone.
d Entrance of a large or average sized center of activity on the east limb.

Chart I. Departure (°F.) of the Mean Temperature from the Normal, and Wind Roses for Selected Stations, June 1945

HOURLY PERCENTAGES
100 50 50 100
Shaded portions show excess (+)
Unshaded portions show deficiency (—)
Lines show amount of excess or deficiency

Chart II. Tracks of Centers of Anticyclones, June 1945. (Inset) Departure of Monthly Mean Pressure from Normal

(Plotted by D. R. Harris)

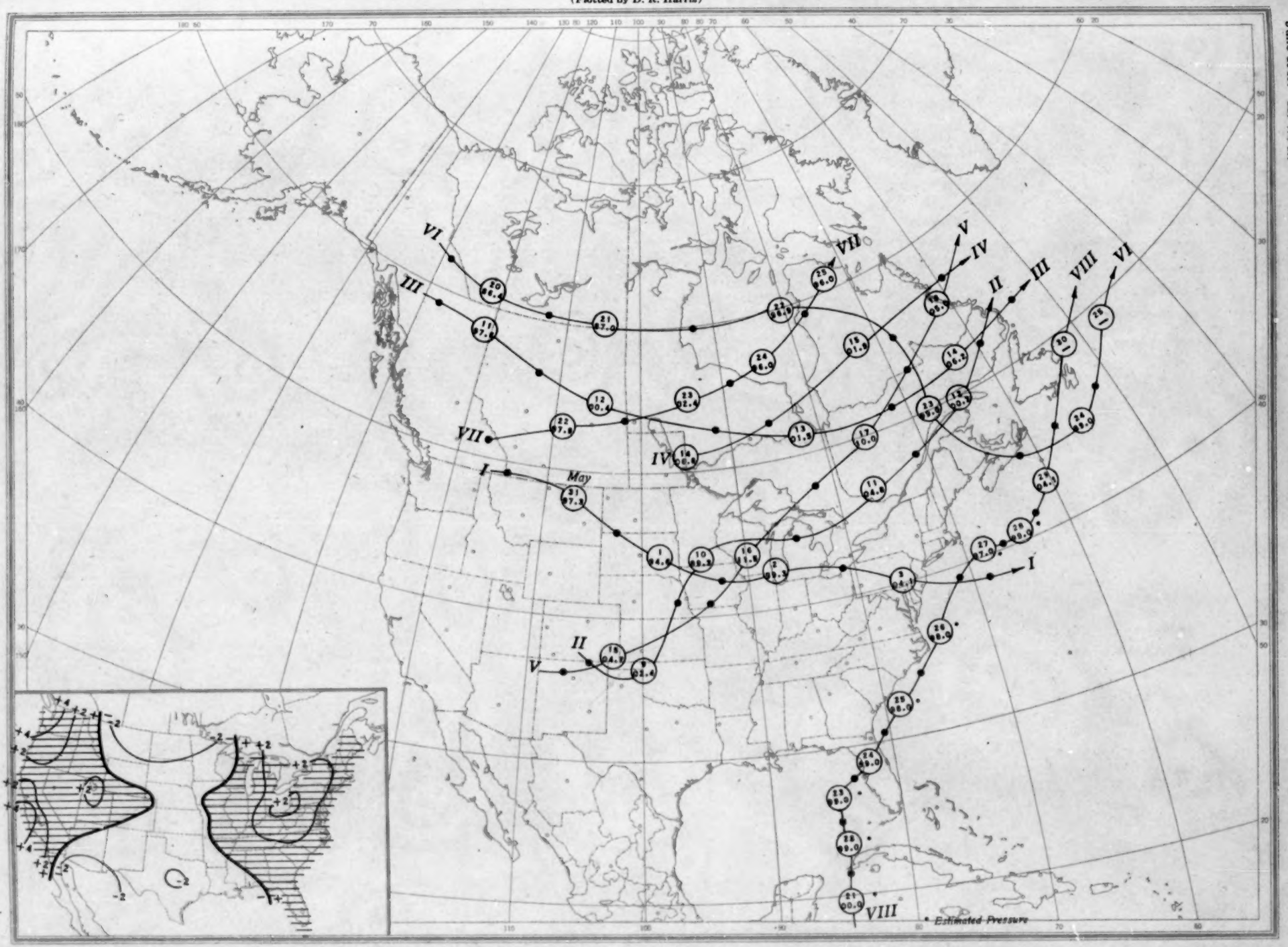


Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Circle indicates position of anticyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of anticyclone at 7:30 p. m. (75th meridian time)

Chart III. Tracks of Centers of Cyclones, June 1945. (Inset) Change in Mean Pressure from Preceding Month

(Plotted by D. R. Harris)



Circle indicates position of cyclone at 7:30 a. m. (75th meridian time), with barometric reading. Dot indicates position of cyclone at 7:30 p. m. (75th meridian time)

Chart IV. Percentage of Clear Sky Between Sunrise and Sunset, June 1945

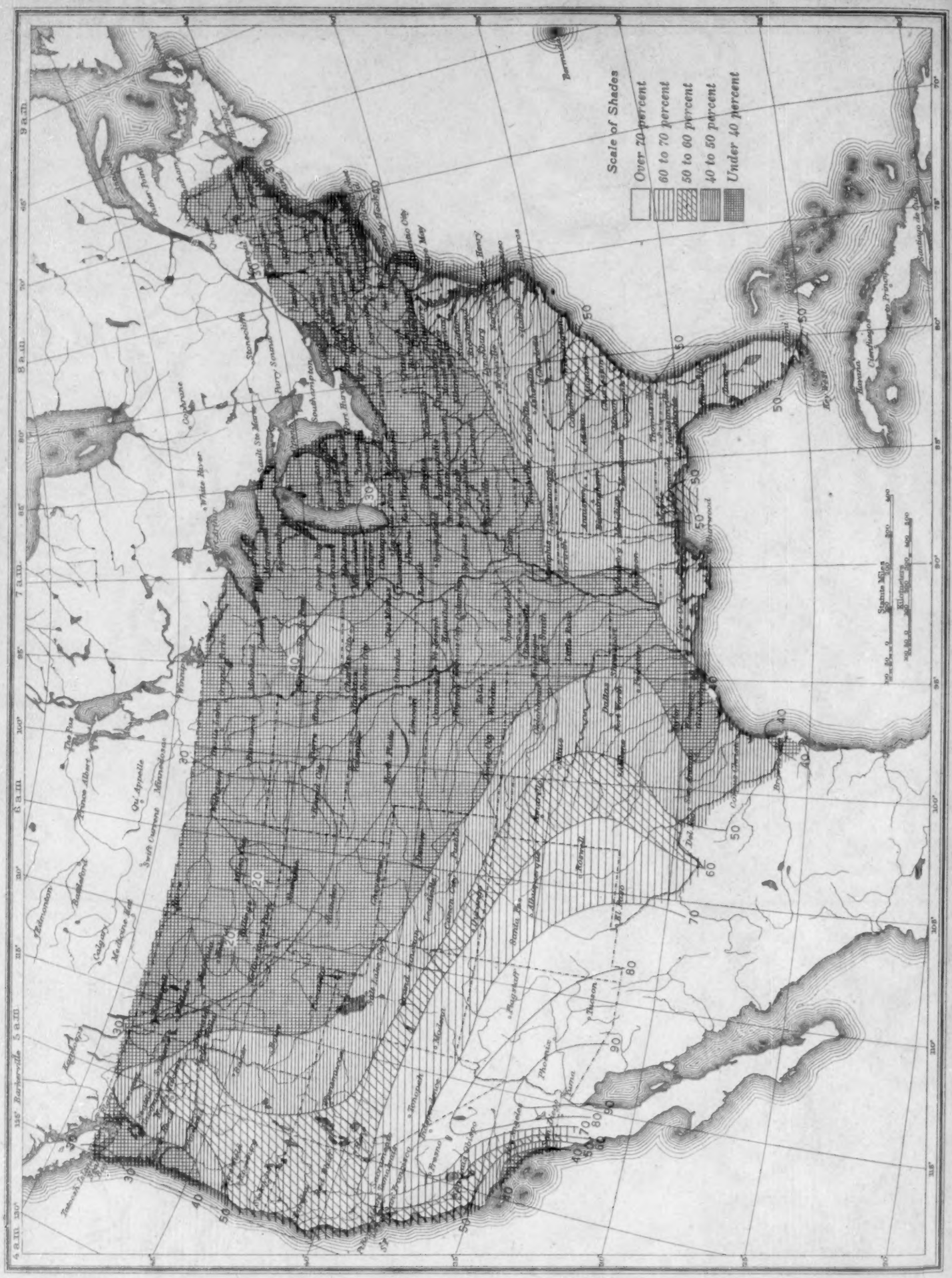


Chart V. Total Precipitation, Inches, June 1945. (Inset) Departure of Precipitation from Normal

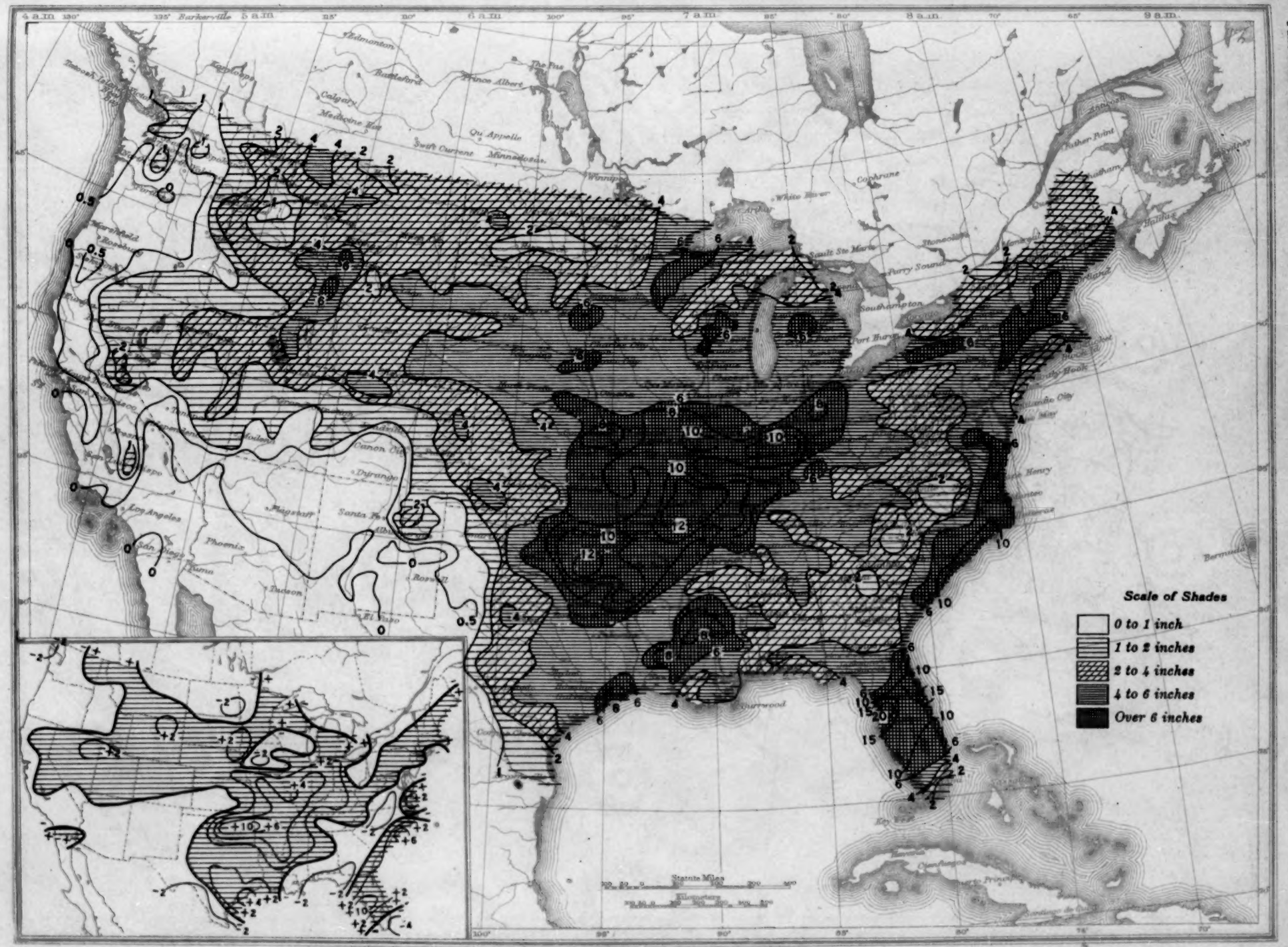


Chart VI. Isobars (mb), at Sea Level and Isotherms (°F.) at Surface; Prevailing Winds, June 1945

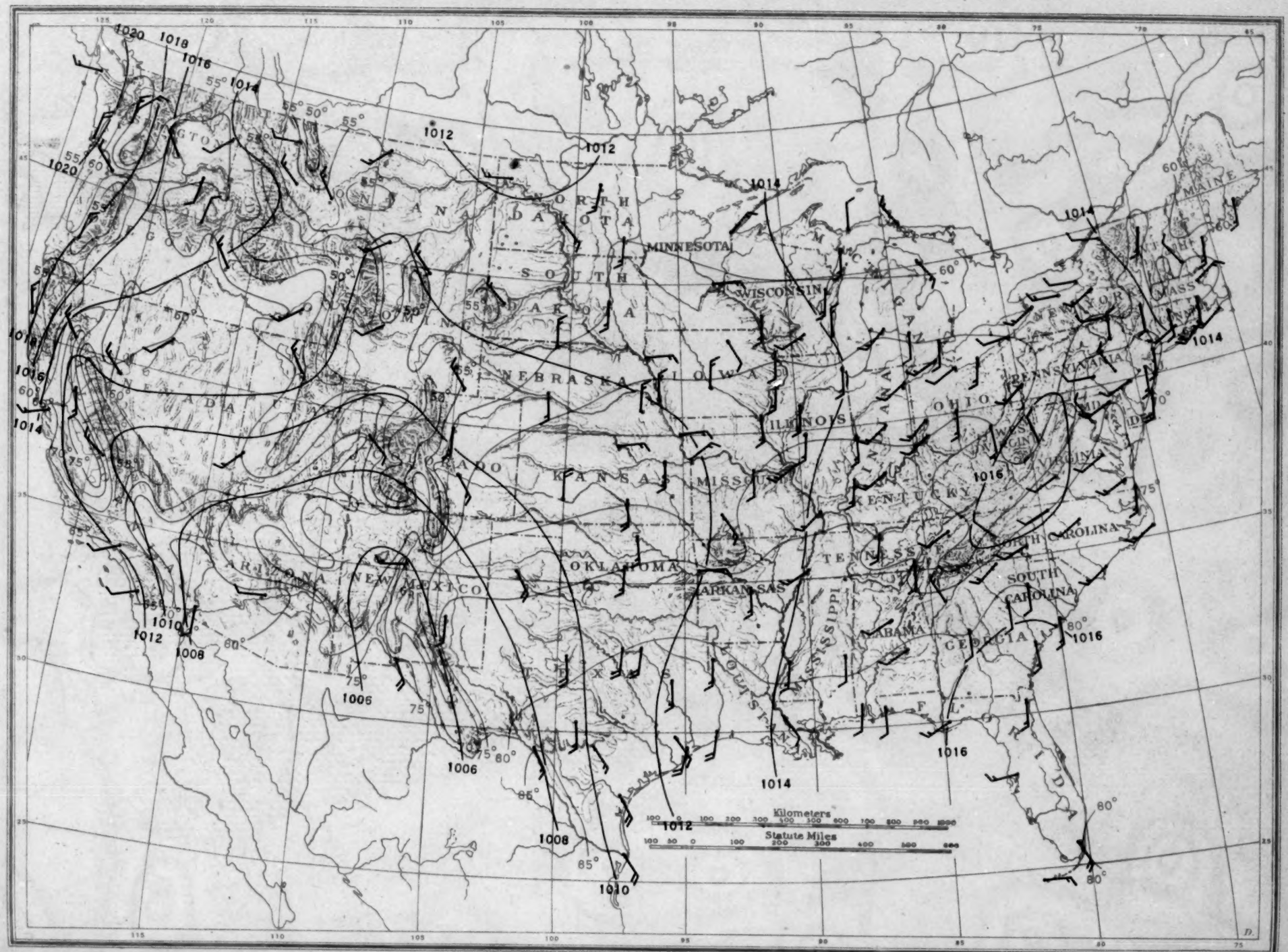


Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) June 1945

Chart VIII. Isobars (mb) for 1,524 Meters (5,000 ft.), and Isotherms (°C.), and Resultant Winds for 1,500 Meters (m. s. l.) June 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.).

Barkerville
Edmonton
Battleford
Prince Albert
The Pas
Calgary
Medicine Hat
Qu'Appelle
Swift Current
Minnedosa
Winnipeg
Cochrane
White River
Fort Arthur
Devils Lake
Grand Forks
Williston
Moorhead
Sault Ste Marie
Stonecliffe
Parry Sound
Marquette
Escanaba
Minneapolis
St. Paul
Rapid City
Pierre
Huron
Sheridan
Yellowstone Park
Boise
Lander
Rawlins
Valentine
Charles City
Dubuque
Chicago
North Platte
Lincoln
Denver
Peoria
Concordia
St. Joseph
Topeka
Kansas City
Columbia
St. Louis
Pueblo
Canon City
Wichita
Springfield
Bentonville
Fort Smith
Memphis
Chattanooga
Nashville
Knoxville
Asheville
Charlotte
Raleigh
Hatteras
Bermuda
Atlanta
Augusta
Charleston
Savannah
Columbia
Dallas
Fort Worth
Shreveport
Meridian
Montgomery
Jackson
Vicksburg
New Orleans
Houston
Galveston
Del Rio
San Antonio
Corpus Christi
Brownsville
Thomasville
Jacksonville
Tampa
Key West
Havana
Cienfuegos
Santiago de Cuba
Phoenix
Tucson
Yuma
El Paso
Albuquerque
Santa Fe
Amarillo
Roswell
Los Angeles
San Diego
Fresno
Bishop
Modena
Independence
Tonopah
Reno
Winnemucca
Elko
Salt Lake City
Ogden
Grand Junction
Medford
Roseburg
Portland
Seattle
Spokane
Kalispell
Helena
Butte
Missoula
Havre
Williston
Minot
Devils Lake
Grand Forks
Moorhead
Fargo
Bismarck
Miles City
Billings
Glasgow
Wolf Point
Kalispell
Cranbrook
Prince George
Quesnel
Kamloops
Vernon
Penticton
Nelson
Trail
Revelstoke
Golden
Banff
Lethbridge
Medicine Hat
Swift Current
Yorkton
Brandon
Kenora
Fort Frances
Port Arthur
White River
Cochrane
Timmins
Sudbury
North Bay
Parry Sound
Muskoka
Orillia
Barrie
Toronto
Hamilton
Niagara Falls
St. Catharines
Kingston
Belleville
Peterborough
Ottawa
Pembroke
Montreal
Quebec
Three Rivers
Sherbrooke
Granby
Drummondville
Farnham
St. Jean
Valleyfield
Cornwall
Brockville
Gananoque
Napanee
Trenton
Oshawa
Whitby
Port Hope
Cobourg
Belleville
Deseronto
Picton
Bloomfield
Wellington
Prince Edward
Brighton
Colborne
Cobourg
Port Hope
Bowmanville
Oshawa
Whitby
Toronto
Hamilton
Brantford
Woodstock
Ingersoll
London
Chatham
Windsor
Sarnia
Owen Sound
Collingwood
Orillia
Barrie
Midland
Penetanguishene
Gravenhurst
Huntsville
Parry Sound
Sault Ste Marie
Manitoulin
Little Current
Espanola
Sudbury
Timmins
Kirkland Lake
Haileybury
North Bay
Mattawa
Pembroke
Renfrew
Arnprior
Carleton Place
Almonte
Perth
Smiths Falls
Brockville
Prescott
Cornwall
Valleyfield
St. Jean
Farnham
Granby
Sherbrooke
Three Rivers
Quebec
Montmagny
Rimouski
Father Point
Chatham
Campbellton
Fredericton
Moncton
Saint John
Yarmouth
Halifax
Sydney
Port aux Basques
Gander
Goose Bay
Labrador City
Wabush Lake
Schefferville
Knob Lake
Fort Chimo
Port Harrison
Great Whale River
Povungnetuk
Lake Harbour
Frobisher Bay
Cape Dyer
Pond Inlet
Resolute
Eureka
Alert
Isachsen
Mould Bay
Cambridge Bay
Coppermine
Fort Norman
Fort Simpson
Fort Nelson
Fort St. John
Dawson Creek
Grande Prairie
Peace River
Fort McMurray
Lac La Biche
Edmonton
Wainwright
Battleford
Prince Albert
The Pas
Flin Flon
Thompson
Churchill
Rankin Inlet
Baker Lake
Coral Harbour
Southampton
Fort Ross
Cape Dorset
Port Burwell
Port Stanley
Kingsville
Leamington
Pelee Island
Point Pelee
Erie
Cleveland
Toledo
Detroit
Port Huron
Saginaw
Grand Haven
Muskegon
Ludington
Manistee
Traverse City
Escanaba
Marquette
Houghton
Ironwood
Duluth
Superior
Grand Rapids
Eau Claire
La Crosse
Madison
Janesville
Rockford
Milwaukee
Gary
Michigan City
South Bend
Fort Wayne
Indianapolis
Terre Haute
Evansville
Louisville
Lexington
Cincinnati
Dayton
Columbus
Zanesville
Wheeling
Parkersburg
Huntington
Ashland
Pikeville
Bluefield
Beckley
Charleston
Clarksburg
Morgantown
Uniontown
Pittsburgh
Johnstown
Altoona
Harrisburg
Lancaster
Reading
Allentown
Bethlehem
Easton
Phillipsburg
Trenton
New Brunswick
Perth Amboy
Newark
Jersey City
Paterson
Hackensack
Passaic
Elizabeth
Plainfield
Somerville
Flemington
Princeton
New Hope
Doylestown
Norristown
Philadelphia
Chester
Wilmington
Dover
Salisbury
Atlantic City
Cape May
Ocean City
Wildwood
Vineland
Millville
Bridgeton
Camden
Woodbury
Glassboro
Mount Holly
Burlington
Trenton
Lakehurst
Toms River
Asbury Park
Long Branch
Red Bank
Freehold
Matawan
Keyport
Perth Amboy
Rahway
Elizabeth
Newark
Jersey City
Hoboken
Paterson
Hackensack
Passaic
Nyack
Tarrytown
White Plains
Yonkers
New Rochelle
Mount Vernon
New York
Bronx
Brooklyn
Queens
Staten Island
Long Island
Riverhead
Patchogue
Babylon
Hempstead
Jamaica
Flushing
Far Rockaway
Montauk Point
Greenport
Sag Harbor
Southampton
Amagansett
East Hampton
Orient
Shelter Island
Mattituck
Cutchogue
Southold
Greenport
Riverhead
Port Jefferson
Huntington
Northport
Glen Cove
Oyster Bay
Roslyn
Great Neck
Port Washington
Whitestone
College Point
Flushing
Jamaica
Far Rockaway
Rockaway Beach
Coney Island
Brighton Beach
Sheepshead Bay
Gravesend
Flatbush
Bushwick
Williamsburg
Greenpoint
Long Island City
Astoria
Corona
Elmhurst
Jackson Heights
Forest Hills
Rego Park
Kew Gardens
Richmond Hill
Ozone Park
Woodhaven
Howard Beach
Jamaica Bay
Rockaway Point
Arverne
Far Rockaway
Lawrence
Cedarhurst
Valley Stream
Hempstead
Freeport
Baldwin
Merrick
Bellmore
Wantagh
Seaford
Massapequa
Amityville
Babylon
Lindenhurst
Huntington
Northport
Centerport
Greenlawn
Commack
Smithtown
Kings Park
Nissequogue
Stony Brook
Port Jefferson
Setauket
Miller Place
Mount Sinai
Rocky Point
Shoreham
Wading River
Manorville
Eastport
Speonk
Westhampton Beach
Quogue
Hampton Bays
Southampton
Bridgehampton
Sagaponack
Wainscott
East Hampton
Amagansett
Montauk
Orient
Greenport
Shelter Island
Mattituck
Cutchogue
Southold
Peconic
Riverhead
Calverton

Chart IX. Isobars (mb), Isotherms (°C.), and Resultant Winds for 3,000 Meters (m. s. l.) June 1945

Isobars and isotherms based on radiosonde observations 11:00 p. m. at (E. S. T.) and winds based on pilot-balloon observations at 5:00 a. m. (E. S. T.)

Chart X. Isobars (mb), Isotherms (°C.), and Resultant Winds for 5,000 Meters (m. s. l.) June 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).

Chart XI. Isobars (mb), Isotherms (°C.), and Resultant Winds for 10,000 Meters (m. s. l.) June 1945

Isobars and isotherms based on radiosonde observations at 11:00 p. m. (E. S. T.) and winds based on pilot-balloon observations at 5:00 p. m. (E. S. T.).